

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

WITNESS: DIRECT CROSS REDIRECT RECROSS
 CRISP 2910

<u>EXHIBITS</u>	<u>FOR ID</u>	<u>IN EVID</u>	<u>WITHDRAWN</u>
<u>CX</u>			
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 None

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 None

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 None

UNITED STATES OF AMERICA
FEDERAL TRADE COMMISSION

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

Tuesday, May 27, 2003

9:30 a.m.

TRIAL VOLUME 16

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

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P R O C E E D I N G S

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JUDGE McGUIRE: This hearing is now in order. Counsel, I'm glad to see everyone back. I hope everyone had a good and happy holiday.

Before we start today, are there any housekeeping items that we need to take up?

MR. OLIVER: No, Your Honor.

JUDGE McGUIRE: Then -- Mr. Perry?

MR. PERRY: Your Honor, we had spoken on Thursday about moving some exhibits in this morning from Thursday's session. I think we may have to do that tomorrow morning. I think everybody is not quite ready.

JUDGE McGUIRE: Okay, good enough.

Then at this time, complaint counsel may call its next witness.

MR. OLIVER: Thank you, Your Honor. Complaint counsel calls Mr. Richard Crisp.

JUDGE McGUIRE: Okay, Mr. Crisp, would you please approach the Bench and the court reporter will swear you in.

Whereupon--

RICHARD CRISP

a witness, called for examination, having been first

duly sworn, was examined and testified as follows:

JUDGE McGUIRE: Sir, have a seat, if you will.

Mr. Oliver, you may proceed.

Yes, let's close that door back there if someone doesn't mind.

DIRECT EXAMINATION

BY MR. OLIVER:

Q. Good morning, Mr. Crisp.

A. Good morning, Mr. Oliver.

Q. How are you today?

A. I'm doing fine, thanks.

Q. Now, Mr. Crisp, at one point in time were you employed at Rambus?

A. Yes, I was.

Q. During what time period were you employed at Rambus?

A. I was employed from October 1991 until June of 2000.

Q. When you left Rambus, did you have any type of consulting agreement with Rambus?

A. Yes, I did.

Q. When you left Rambus, did you hold any Rambus stock?

A. I'm sorry, I couldn't understand your question.

Q. When you left Rambus, did you hold any Rambus

stock?

A. Yes, I did.

Q. When you left Rambus, did you hold any Rambus stock options?

A. Yes, I did.

Q. Now, Mr. Crisp, I also understand that at the -- as a result of leaving Rambus, you were in a financial position that you did not have to start work again until fairly recently. Is that correct?

A. I'm sorry, I couldn't understand your question.

Q. Yes. At the time that you left Rambus, you were in a sufficient financial position that you did not have to start work again until fairly recently. Is that correct?

A. I think that's largely true.

Q. Now, Mr. Crisp, were you deposed in the Infineon case?

A. Yes, I was.

Q. And you testified in the Infineon case?

A. That's correct.

Q. Were you represented by counsel in that case?

A. Yes, I was.

Q. Who was your counsel?

A. You mean the name of the firm or --

Q. Yes, the name of the firm.

A. It was Gray Cary.

Q. That was the same law firm that represented Rambus in that matter?

A. That's my understanding.

Q. And who paid for your legal counsel in that matter?

A. I assume Rambus did.

Q. You did not pay counsel in that matter?

A. That's correct.

Q. And did Rambus compensate you in any way for any of the time that you spent in connection with the Infineon litigation?

A. I'm not sure what you mean by "in connection." Could you be more precise?

Q. Yes. Did Rambus compensate you in any way for any of the time that you spent in preparation for any of your deposition or trial testimony in the Infineon litigation?

A. Yes, they did.

Q. Now, you were also deposed in the Micron case. Is that right?

A. That's correct.

Q. Were you represented by counsel in that case?

A. Yes, I was.

Q. Who was your counsel in that case?

A. It was also Gray Cary.

Q. Again, the same firm that represented Rambus in that litigation?

A. I believe that Gray Cary was representing Rambus in the Micron case. I'm not certain of that.

Q. Who paid your legal counsel in connection with the Micron litigation?

A. I assume Rambus did.

Q. In any event, you did not pay for your legal counsel in that matter?

A. That's correct.

Q. Did Rambus compensate you in any way in connection with the preparation for your deposition testimony in the Micron matter?

A. Yes, they did.

Q. Mr. Crisp, are you aware that you have been identified by name in the Federal Trade Commission's complaint in this matter?

A. I'm not sure what you mean by "identified by name."

Q. Are you aware that your name appears in the Federal Trade Commission's complaint in this matter?

A. I think I am, yes.

Q. Are you represented by counsel in connection with this proceeding?

A. Yes, I am.

Q. Who is your counsel in connection with this proceeding?

A. Munger, Tolles & Olson.

Q. Are you paying Munger Tolles counsel yourself?

A. No, I'm not.

Q. Do you understand who is paying counsel on your behalf?

A. I presume Rambus is.

Q. Has Rambus compensated you in any way in connection with the preparation for deposition or trial testimony in this matter?

A. Yes, I had to take my vacation time, so I asked to be compensated.

MR. OLIVER: May I approach, Your Honor?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document that's been marked as CX-1454. This is a copy of Rambus' patent application published under the Patent Cooperation Treaty.

Do you recognize this document?

A. I don't believe I've ever seen it.

Q. Do you recognize CX-1454 as being virtually identical to the initial patent application filed by

Rambus in the United States?

MR. PERRY: Your Honor, there is no foundation for him, it's a hundred pages long, to say if it's identical. He's never seen --

JUDGE McGUIRE: Sustained.

MR. OLIVER: Your Honor, may I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document that's been marked as CX-1451. You recognize this as the so-called '898 application filed on behalf of Rambus in April 1990? Is that right?

A. It's been an awfully long time since I saw this document. It's hard for me to say with certainty, but --

JUDGE McGUIRE: Well, then, take your time if you have to and go through it. We don't want to push you into this. So, if you need to take a moment, take a moment and go through it.

THE WITNESS: Thank you, Your Honor. (Document review.) I have no reason to dispute this is the '898 application.

BY MR. OLIVER:

Q. Okay. If I could ask you to turn, please, to page 129 in CX-1451.

A. Would that be the numbers in the lower right-hand corner?

Q. Yes, it would.

A. Okay. I'm on that page.

Q. Do you see a drawing on the bottom of that page?

A. I see a Figure 3 drawing.

Q. Okay, if you could please compare Figure 3 to the figure appearing on the first page of CX-1454, do those appear to you to be the identical figure?

A. They look very similar to me.

Q. Now, that Figure 3 appearing on page 129 of CX-1451 and appearing on the first page of 1454, that represents a number of Rambus memory chips on a bus. Is that correct?

A. That's my interpretation, yes.

Q. The object on the right-hand side of that drawing represents what's referred to as a master?

A. It could be called a master, yes.

Q. And that master could be a CPU or a central processing unit. Is that right?

A. It's possible, it could be.

Q. And the objects on the left-hand side represent individual RDRAM chips. Is that right?

A. Yes, that's right.

Q. And the lines running between the master and the memory chips are the bus lines?

A. That's what I'd call them.

MR. PERRY: Your Honor, if I could, this individual is not designated as an expert, and I think we're asking him to interpret the pictures and the claims here, that's where we're going with this, and you'll recall we raised the same issue with respect to an earlier witness, Mr. Meier. I don't know how much further he's going, but I just wanted to alert --

JUDGE McGUIRE: Mr. Oliver, any response?

MR. OLIVER: I don't intend to do too much of it, Your Honor, but this is an engineer who was with Rambus for ten years. His responsibilities included marketing the Rambus RDRAM architecture. He was intimately familiar with it, as I think the testimony will make clear. He had reviewed the application, and he was involved in subsequent patent work based upon this application.

MR. PERRY: I don't have any question that he is a very good engineer who was familiar at the time with the RDRAM architecture. My point simply is all that we're doing is asking what does this patent show. There has been no foundation laid that he's a patent lawyer or understands patents.

JUDGE McGUIRE: All right, so noted, but I am going to give him an opportunity to answer these questions to the extent he's able to do so, and if at any point, Mr. Crisp, you can't answer these questions, just say I don't know the answer, but on that basis, I'm going to entertain this line of inquiry.

MR. OLIVER: Thank you, Your Honor.

BY MR. OLIVER:

Q. Mr. Crisp, coming back to the drawing that appears on page 1 of CX-1454, again, based on your understanding, this drawing does not show any modules, does it?

A. It does not show any?

Q. Any modules.

A. You know, there's different usage of the word "module" that I've encountered in my career. The usage that I'm accustomed to using, the answer would be no, but there are other usages of the term "module" where the answer would have to be yes. So, perhaps you could be more succinct as to which definition of "module" you would like for me to use when I answer this.

Q. Well, the drawing on page 1 of CX-1454 shows individual RDRAM chips mounted on a bus, doesn't it?

A. It does, yes.

Q. Mr. Crisp, if I could direct your attention

back to CX-1451, please, and if I could ask you to turn, please, to page 9.

Now, underneath Summary of the Invention, do you see that caption?

A. Yes, I do.

Q. Let me read part of that paragraph, and then I'll follow up with some questions.

"The present invention includes a memory subsystem comprising at least two semiconductor devices, including at least one memory device, connected in parallel to a bus, where the bus includes a plurality of bus lines for carrying substantially all address, data and control information needed by said memory devices, where the control information includes device-select information and the bus has substantially fewer bus lines than the number of bits in a single address."

Do you see that?

A. Yes, sir, I do.

Q. Now, most synchronous memory devices sold in the early 1990s had more bus lines than the number of bits in a single address. Isn't that right?

A. I'm sorry, at what point in time?

Q. The early 1990s.

A. And you said synchronous memory devices. Was

there a particular type of synchronous memory device you had in mind?

Q. I misspoke, asynchronous memory devices.

A. You mean nonsynchronous?

Q. Yes.

A. Okay, now, could you ask the question again?

I'm sorry.

Q. Yes. In the early 1990s, most asynchronous memory devices sold had more bus lines than the number of bits in a single address. Isn't that right?

A. I -- I believe that's correct.

Q. And during the 1992 time frame, you're aware that JEDEC was working on a standard for synchronous DRAMs that would have contained more bus lines than the number of bits in a single address. Isn't that correct?

A. I'm really not sure how to answer that. I think they were -- if I can -- it's been a long time, but if I can remember correctly, they -- they were working on a -- a number of different devices, some of which were narrow bus devices, some of which had -- by "bus," I mean the data bus -- some of which were very wide bus devices, depending on the application. So, I'm not quite sure how to answer your question.

Q. Well, the standard for synchronous DRAM that

JEDEC adopted contained more bus lines than the number of bits in a single address. Isn't that correct?

A. I don't -- I don't believe I could agree with that completely.

Q. Okay. Well, there will be other testimony in the record on that point.

MR. PERRY: Your Honor, can we avoid the comments by counsel like that, please?

JUDGE McGUIRE: So noted, Mr. Perry.

BY MR. OLIVER:

Q. Let me continue on page 9, please. The last three lines in that paragraph read, "and the bus carries device-select information without the need for separate device-select lines connected directly to individual devices."

Do you see that?

A. I'm sorry, could you give me the line numbers? I was trying to follow it, and I just haven't seen this.

Q. On page 9 --

A. Yes.

Q. -- lines 17 through 19.

A. Okay, I see those lines.

Q. It reads towards the end of line 17, "the bus carries device-select information without the need for

separate device-select lines connected directly to individual devices."

Do you see that?

A. Yes, I do, sir.

Q. Now, in the early 1990s, most asynchronous memory devices sold had separate device-select lines connected directly to individual devices, didn't they?

A. Again, if you could narrow the type of memory device to which you're referring, it would be easier for me to answer.

Q. Let me ask a different question. The -- the JEDEC standard for synchronous DRAMS, that standard provided for separate device lines connected directly to the individual devices, didn't it?

A. Yes, that's true.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document that's been marked as CX-1320. This is a document that you prepared, isn't it?

A. It looks very familiar.

Q. Do you see in the lower left-hand corner, the lead slide, your name, R. Crisp?

A. I'm having a little difficulty reading that. I

need to see if I can put on a different set of glasses.

JUDGE McGUIRE: It's on your screen there, Mr. Crisp.

THE WITNESS: Oh, okay, thank you. Thank you, Your Honor. Yes, I do see that. Thank you.

BY MR. OLIVER:

Q. And CX-1320 is a document in which you describe certain aspects of SDRAMs. Is that right?

A. That's right, yes.

Q. And if I could direct your attention to the first page, the figure in the upper right-hand corner, do you see that?

A. Yes.

Q. And that's a page which you set forth -- diagram a typical SDRAM system topology?

A. Yes, sir.

Q. That drawing in the upper left-hand slide shows a master device on the left-hand side of the drawing. Is that correct?

A. Yes, sir, that's correct.

Q. I believe it's marked -- actually, I can't read it, so I won't try.

On the right-hand side, it shows SDRAM chips. Is that right?

A. It shows SDRAM chips located on -- or actually,

affixed to what I would call a memory module.

Q. Okay. I believe that they are labeled banks in the drawing. Is that right?

A. Yes, sir, that's right.

Q. And that's what you were referring to as modules?

A. Yes, sir, that's correct.

Q. So, each module would be represented by a vertical box containing four devices. Is that right?

A. Yes, sir, that's correct.

Q. And the drawing shows four such groupings of devices?

A. Yes.

Q. And the various lines running between the master and the various SDRAM chips are the bus lines. Is that right?

A. I would have a hard time characterizing all of those lines as bus lines, but there certainly are some of them that I would characterize that way.

Q. And many of those lines actually represent multiple lines. Is that correct?

A. Yes, sir. In fact, I think all of them -- those heavy lines represent multiple -- or groupings of wires, yes.

Q. Now, do you see some lines running from the

master on the left down towards the bottom of the slide, then across to the right, and then up to the various banks?

A. Yes, sir, I do.

Q. Now, those represent chip-select lines, right?

A. They actually represent more than chip-select lines.

Q. But among other things, they represent chip-select lines. Is that right?

A. That's correct, yes.

Q. Now, this figure in the upper right-hand slide on page 1 of CX-1320 illustrates generally the type of DRAM interface that JEDEC was working on in the 1991 to 1993 time period. Isn't that right?

A. It represents one kind of DRAM interface that JEDEC was working on within that time frame.

Q. Well, it represents the kind of interface that JEDEC standardized in its SDRAM standard. Is that right?

A. Yes, sir, that -- it does represent that, yes.

Q. And if I could ask you to turn back, please, to page 1 of CX-1454, the figure we were looking at earlier. Do you see that figure?

A. Yes, sir, I do.

Q. That figure does not contain any separate

device-select lines, does it?

A. I see nothing that's denoted on here as to what any of those lines are, so other than my knowledge that this is designed to pertain to an RDRAM system, I wouldn't have any way of answering that question.

Q. Well, based on your knowledge that this is -- strike that.

Based on your knowledge of the RDRAM system, you recognize that the figure on page 1 of CX-1454 does not contain any separate device-select lines. Isn't that right?

A. Yes, sir, that's correct.

Q. Now, Mr. Crisp, when you first read the original 1990 application, you believed it was limited to configurations which shared the data and address lines, a packet bus, narrow high-speed clock devices and signals moving in opposite directions on the clock. Isn't that right?

A. I believe that's correct.

Q. In other words, when you read the initial Farmwald-Horowitz application back in the early 1990s, you initially believed it was an RDRAM patent. Isn't that right?

MR. PERRY: Objection, that's vague as to what he means by "RDRAM patent."

JUDGE McGUIRE: Any comment on that, Mr. Oliver?

MR. OLIVER: Your Honor, this is something on which he testified in the Infineon trial, and he answered almost precisely this question in the Infineon trial.

JUDGE McGUIRE: Overruled. I'll entertain the question.

THE WITNESS: I'm sorry, would you ask the question again, please?

BY MR. OLIVER:

Q. Yes. When you read the initial Farmwald-Horowitz application back in the early 1990s, you initially believed it was an RDRAM patent. Isn't that right?

A. Actually, I believed it was an application that was designed to describe the RDRAM system invention.

Q. And you believed in your words that it was limited to RDRAM when you initially reviewed it. Isn't that right?

A. I have no reason to dispute that I said that previously, but I think it also covered the controllers as well.

Q. But over time, would it be fair to say that your view as to whether the initial application would

cover RDRAM or could also cover other architectures changed?

A. I think the answer is yes.

Q. And over time, from 1992 on, the claims that were attached to the initial application also changed. Isn't that right?

A. I'm not sure that the claims in the initial application changed. I think there were some other cases or other applications that had originated from this original application, and I believe that as time went on, those -- there were some changes to some of those claims.

Q. Okay. So, it would be fair to say, then, that claims were added after 1992?

A. I believe that that's true, yes.

Q. And that there were also amendments made to certain of those claims over time?

A. I generally believe that that's true, yes.

Q. And those changes in claims were made by various individuals at Rambus working with patent lawyers. Is that right?

A. I don't believe that's correct.

Q. The claims were -- excuse me, the changes to claims were made by patent lawyers. Isn't that right?

A. That's my understanding, yes, sir.

Q. And various individuals at Rambus worked with patent lawyers with respect to claims. Isn't that right?

A. Well, you say "worked with." I'm not sure precisely what you have in mind.

Q. Various individuals at Rambus had discussions with patent lawyers with respect to proposed claims. Isn't that right?

A. I believe that's correct, yes.

Q. And you were among those individuals that had discussions with patent lawyers. Isn't that right?

A. Yes, I am.

Q. And in many instances -- strike that.

In a number of instances, you were proposing ideas for new claims. Isn't that right?

A. Yes, sir, that's correct.

Q. Now, Mr. Crisp, I believe you testified that you joined Rambus in late 1991. Is that right?

A. That's correct.

Q. And beginning in May 1992 and continuing until Rambus withdrew from JEDEC, you were Rambus' primary representative at the JEDEC JC-42.3 subcommittee?

A. That's correct, yes.

Q. Now, Mr. Crisp, Rambus didn't really care what the JEDEC standard would be, did it?

MR. PERRY: Which standard, Your Honor? It's vague.

JUDGE McGUIRE: Sustained.

BY MR. OLIVER:

Q. Mr. Crisp, Rambus didn't really care what the JEDEC SDRAM standard would be, did it?

A. I -- I don't know what Rambus thought about or didn't think about. I'm -- I just know my own perspective.

Q. Well, Rambus had no plans to ever use the JEDEC standards, did it?

MR. PERRY: Again, Your Honor, vague as to which standard.

JUDGE McGUIRE: Also sustained, Mr. Oliver.

BY MR. OLIVER:

Q. Rambus had no plans ever to use the JEDEC SDRAM standard, did it?

A. You say "use." I'm not sure in what capacity you mean.

Q. Well, Rambus had no plans to manufacture any JEDEC-compliant SDRAMs, did it?

A. Rambus is not in the business of manufacturing any products.

Q. So, your answer is no?

A. Well, I'm trying to answer your question, but

I'm not exactly sure exactly what you're asking.

Q. I'm asking, Rambus never had any plans to manufacture products according to the JEDEC SDRAM standard, did it?

A. That's correct, yes.

Q. And Rambus never had any plans to license the JEDEC -- strike that.

Rambus never had any plans to manufacture the -- manufacture devices made according to the JEDEC DDR SDRAM standard, did it?

A. I believe that's correct.

Q. Rambus was promoting its RDRAM architecture, wasn't it?

A. To who?

Q. To various companies.

A. Yes, that's correct.

Q. It would be fair to say, wouldn't it, that Rambus viewed the potential JEDEC standards as a source of competition for RDRAM?

A. I'm not sure that we viewed any standards as a source of competition.

Q. Well, Rambus certainly thought that if DDR SDRAM actually became a product, it had the potential to hurt Rambus' business, didn't it?

A. I believe that's true, yes.

Q. So, Rambus perceived DDR SDRAMs to be a potential threat?

A. I certainly believe that some people there believed that, yes.

Q. Now, you believed that as well, didn't you?

A. I think I did at some point in time.

JUDGE McGUIRE: All right, now, I want to clarify that answer. When you said that you believe that some people there thought that, was that "there" meaning at Rambus or at JEDEC?

THE WITNESS: Your Honor, I meant at Rambus.

JUDGE McGUIRE: I'm sorry, you're talking about Rambus?

THE WITNESS: That's correct, Your Honor.

JUDGE McGUIRE: All right, very good.

All right, Mr. Oliver.

BY MR. OLIVER:

Q. Just to be certain the record is clear, you understood that certain people at Rambus believed that DDR SDRAMs could be a potential threat to Rambus' business, right?

A. Yes, that's correct.

Q. In fact, you didn't have any interest in seeing JEDEC succeed in developing widely -- widely used standards, did you?

MR. PERRY: Vague as to which standard, Your Honor.

MR. OLIVER: Your Honor, I'm attempting to --

JUDGE McGUIRE: Sustained.

BY MR. OLIVER:

Q. You didn't have any particular interest in seeing JEDEC succeed in developing a widely used standard for SDRAM, did you?

A. I think that answer is correct, yes.

Q. You also didn't have any interest in seeing JEDEC succeed in developing a widely used standard for DDR SDRAM, did you?

A. I was not interested in seeing potential competitive devices appear on the market.

Q. In fact, you actually hoped that JEDEC would fail to produce an SDRAM standard, didn't you?

A. I don't think I was so concerned about the standard as I was the devices.

Q. Well, in fact, very shortly after you attended the first JEDEC meeting in April 1992, you wrote an email to others in Rambus about dissension among JEDEC members, didn't you?

A. I think that was a portion of another email, but I believe I did speak to that issue, yes.

Q. And you suggested that Rambus consider leaking

this dissension to the press, right?

A. Yes, sir, I did. May I explain something about my answer there?

Q. Let me show you a document, I have a few other questions, and if that allows you to explain, you can explain at that point; otherwise, your counsel will ask you follow-up questions.

May I approach, Your Honor?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-1708. This is the email that you were referring to in your earlier answer, right?

A. I believe that's correct, yes.

Q. And if I could ask you to turn, please, to page 5 of CX-1708.

A. Yes.

Q. Now, you'll see the caption at the top of that page is Dissension in the JC42 Meeting?

A. Yes, sir, I do.

Q. Would it be fair to say that the first two paragraphs describe different positions taken by certain individuals?

A. Yes, sir, that's right.

Q. If I could direct your attention to the third

paragraph, it reads, "I think we should make sure this gets leaked to the press. Something like RIFT forms in JEDEC SDRAM working group: Major system houses now leaning away from JC42 committee recommendation."

Do you see that?

A. Yes, sir, I do.

Q. And continuing in the next paragraph, "Now if we can get this on the front page of EETimes and the next issue of Nikkei Electronics, this should help our air war."

Do you see that?

A. Yes, sir, I do.

Q. Now, your reference there to air war, that referred to Rambus' efforts to persuade customers to use the RDRAM architecture rather than a JEDEC-compliant architecture. Isn't that right?

A. It really referred just to our desire to have people use the RDRAM architecture.

Q. Now, you recognize that it is contrary to JEDEC rules to leak information to the press?

A. I'd been seeing a number of reports coming out in the press that this standard was moving very quickly toward completion, and I had heard some discussion within JEDEC that people shouldn't be talking to the press. I felt like there was an inaccurate

representation of what was going on within JEDEC that was being reported in the press.

Q. You certainly recognized that discussions in JEDEC were confidential, right?

A. I'm not sure if I fully understood that or not. I know I heard some discussion that people did not want to see companies talking to the press, but I guess I don't know for -- with certainty that that was absolutely contrary to the rules.

Q. Let me direct your attention to the third line in the last paragraph.

A. Yes.

Q. It reads, "One downside is that the discussions are confidential."

That's what you wrote to your superiors back at Rambus. Isn't that right?

A. Yes, but I'm not sure that in retrospect I knew that that was actually true. I think there was some disagreement as to whether or not that was, in fact, the case. So, I was confused, quite honestly.

Q. At the time, you certainly understood the discussions to be confidential, didn't you?

A. I don't know exactly what I understood. That was I think the first time I had gone to a meeting.

Q. Well, you understood that if you leaked

information to the press, you could be censured by JEDEC, right?

A. I made that comment in here, that I thought that was a possibility.

Q. In fact, you thought it was even a possibility that you could be tossed out of JEDEC for leaking information to the press. Isn't that right?

A. I thought that was a possibility. And this never actually ended up happening.

Q. Now, in your understanding, Rambus joined JEDEC in order to learn what the competition was working on and what sort of issues would arise when designing SDRAMs and SGRAMs, right?

A. I think that was part of the reason.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-837. This is an email that you sent to the executive group at Rambus. Is that correct?

A. Yes, that's correct, among other people.

Q. And you also sent it to Tony Diepenbrock?

A. That's correct, as well as a copy to myself.

Q. And you sent this on September 23, 1995?

A. That's the date that's marked on it.

Q. If I could direct your attention to the second to last paragraph, and you're responding to comments from Tony Diepenbrock concerning patent position within standards organizations. Is that right?

A. I'm sorry, could you ask the question again? I just had to read the paragraph.

Q. Yes. You were responding to comments that Tony Diepenbrock had made regarding the Rambus' patent position within standards organizations. Isn't that right?

A. I think that's largely true. I'm not sure that that's all of what the purpose was of this -- of this memo.

Q. Well, we'll come back to this memo later and discuss it in more detail at that point. For current purposes, I want to focus your attention on the second sentence of that paragraph. It reads, "At the time we began attending JEDEC we did so to learn what the competition was working on and what sort of performance systems using that technology would be able to achieve and what sort of issues would arise when designing with the devices (primarily SDRAM/SGRAM)."

Do you see that?

A. Yes, sir, I do.

Q. And that's what you wrote to the executive

group in September 1995?

A. Yes.

Q. Now, by the time that Rambus left JEDEC, if not sooner, you recognized that the most valuable patents are the ones that must be used in order to be in compliance with the standard, correct?

A. Yeah, assuming that the -- that the product that was standardized was of some commercial value.

MR. OLIVER: May I approach, Your Honor?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document that's been marked as CX-903. This is an email that you sent in September of 19 -- excuse me, in August of 1996.

Do you see that?

A. Yes, sir, I do.

Q. Now, the "To" line here has been blanked out, so we are unable to tell from this document who you sent the document to, but the subject is "Rambus Standards Committee."

Do you see that?

A. Yes, sir.

Q. Now, in this document, you were responding to a proposal to create a Rambus standards committee. Is that right?

A. I believe that's correct.

Q. And the proposal was to create a standards committee for Rambus' partners relating to Rambus technology?

A. I -- you know, I don't think I would really characterize it that way.

Q. Well, let me direct your attention to the third paragraph, the first sentence. It reads, "This is about pacification of our partners, pure and simple."

Do you see that?

A. Yes, I do.

Q. Now, the proposed standards committee you referred to internally at Rambus at REDEC, R E D E C. Is that right?

A. I have heard that name used in connection with this proposal.

Q. And you wrote this email to others within Rambus offering your assessment of the proposed Rambus standards organization. Is that right?

A. I would really call it sort of my opinion about what I thought about the proposal.

Q. Is it fair to say that you didn't think very highly of the proposal?

A. I was not in favor of it.

Q. If I could direct your attention to the second

page, the third paragraph from the bottom. The first sentence there, you write, "The most valuable patents are ones that must be used in order to be in compliance with the standard."

Do you see that?

A. Yes, sir, I do.

Q. And the reason they're valuable is that such patents cannot be avoided. Is that right?

A. Well, in the situation to where you want to build a device that's compliant with the standard, whatever the standard is.

Q. Okay, well, that's what you wrote in the very next sentence, isn't it? Let me read that sentence for you. "Unlike implementation patents which may or may not be required for the job -- to get the job done, ones that must be used cannot be avoided."

Do you see that?

A. Yes, sir, I do.

Q. Now, you also knew that to the extent possible, the job of JEDEC was to create standards that steer clear of patents that must be used to be in compliance with the standard, right?

A. Well, I wrote that, yes.

Q. Are you referring now to the next sentence in your email?

A. I'm sorry, I'm having a hard time hearing you.

Q. Well, let me read the next sentence for you. It's, again, in the third paragraph from the bottom of page 2 of CX-903.

"The job of JEDEC is to create standards which steer clear of patents which must be used to be in compliance with the standard whenever possible."

Do you see that?

A. Yes, I do.

Q. And again, that's what you wrote in your email as of August of 1996?

A. Yes.

Q. Now, you also recognized that the concept of open standards was at odds with Rambus' business model, right?

A. I -- it really depends on what's meant by "open standards," but certainly one interpretation of "open standards" could be potentially at odds with Rambus' business model.

Q. Well, by "open standards," you meant standards that were offered in public domain to any company who wanted to use it, right?

MR. PERRY: Objection, it's vague as to whether he's talking about this particular document where he uses that term or not.

JUDGE McGUIRE: Sustained.

BY MR. OLIVER:

Q. In writing this document, you meant standards that were offered in the public domain to any company that wanted to use them, right?

A. I'm sorry, I'm having a hard time following your question.

Q. My question is, at the time that you wrote CX-903 in August of 1996, at that time, you understood "open standards" to mean standards that were offered in the public domain to any company that wanted to use it, right?

A. I think that's basically correct.

Q. In other words, a standard that's free of royalties, right?

A. I'm not sure that that's always the case.

MR. OLIVER: May I approach, Your Honor?

JUDGE McGUIRE: You may.

MR. OLIVER: I believe this will not be on the screen.

BY MR. OLIVER:

Q. Mr. Crisp, do you recall being deposed in connection with the FTC matter?

A. I'm sorry, would you ask the question again?

Q. Do you recall being deposed in connection with

this FTC matter?

A. Yes, I do, sir.

Q. Do you recall that I took your deposition in San Francisco?

A. That's correct, I do.

Q. I've handed you a copy of the transcript from that deposition, if I could ask you to turn, please, to page 30.

JUDGE McGUIRE: Could we state just so it's clear the date of this deposition, Mr. Oliver?

MR. OLIVER: Yes, Your Honor, the deposition was conducted on February 14, 2003.

JUDGE McGUIRE: Thank you.

BY MR. OLIVER:

Q. And if I could ask you to look then on page 30, beginning at line 24, continuing to 31, line 3.

"QUESTION: In other words, a standard that is free of royalties?

"ANSWER: I think that's pretty close to what I would think that that means. I think that's fundamentally at odds with the business of licensing technology."

Do you see that?

A. Yes, I do see that. I wanted to read some of the rest of it so I could get context of what it was we

were discussing. (Document review.) Okay.

Q. Are you finished?

A. Yes.

Q. Now, Mr. Crisp, in August 1996, you also recognized that if Rambus were to create a standards organization that was modeled on JEDEC, participants would have an expectation that the resulting work would be free of any patent encumbrance, right?

A. I think that's generally what I had believed at that time that I would have expected the participants to believe.

Q. Now, between 1991 and 1996, you knew that JEDEC was associated with the Electronic Industries Association?

A. I believe I knew that, yes.

Q. And the Electronic Industries Association is also known as EIA. Is that right?

A. That's my understanding.

Q. You also understood during that time period that meetings of JEDEC committees and subcommittees were conducted in accordance with the EIA Legal Guides?

A. I think it was a point in time when I had that understanding.

Q. A point in time between 1991 and 1996?

A. That's correct, sir.

Q. Now, the EIA Legal Guides provided that all standardization programs shall be carried on in good faith, right?

MR. PERRY: Objection, Your Honor, lacks foundation that he ever saw them, and the document speaks for itself.

MR. OLIVER: Your Honor, I'm asking for his understanding based on his attendance at JEDEC meetings for four years.

JUDGE McGUIRE: Overruled.

THE WITNESS: I think I've seen that sentence in an EIA manual or something that means something very close to that.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I have handed you a document that's been marked as CX-204, ask you to turn, please, to page 6 -- excuse me, it would be -- looking at the numbers at the lower right-hand corner, it would be page 5. If I could direct your attention to the upper left-hand corner, it's the top of internal page 6, the caption C, Basic Rules for Conducting Programs.

Do you see that?

A. Yes, sir, I do.

Q. Underneath that, it reads, "All EIA standardization programs shall be conducted in accordance with the following basic rules:

"One, they shall be carried on in good faith under policies and procedures which will assure fairness and unrestricted participation."

Do you see that?

A. Yes, I do, sir.

Q. Does that refresh your recollection as to where you had seen this before?

A. Yes, I -- I just have seen this very recently.

Q. But you testified earlier you were aware of this between 1991 and 1996. Isn't that correct?

A. I think I made that testimony.

Q. Now, Mr. Crisp, you were also aware that JEDEC standardization programs shall not result in restricting competition, giving a competitive advantage to any manufacturer or excluding competitors from the market, right?

A. I see that here in this document.

Q. Now, JEDEC also followed EIA rules regarding use of patents. Isn't that right?

A. I'm sorry, I'm having a hard time hearing your questions with the echoes in the room.

Q. JEDEC also followed EIA rules regarding use of

patents. Isn't that right?

A. I believe that they were controlled by EIA rules. Whether or not they always followed them, I really don't know.

Q. Well, the EIA rules stated that requirements in EIA standards which called for the use of patented items should be avoided, right?

A. I believe that's correct.

Q. EIA rules also provided that no program of standardization should refer to a product on which there is a known patent unless all the technical information covered by the patent is known to the committee. Is that right?

A. I believe that's correct.

Q. Now, focusing again on the time period from May of 1992 through the end of 1995, you were attending the 42.3 subcommittee meetings as the primary representative of JEDEC -- primary representative of Rambus. Is that right?

A. What time period again?

Q. May of 1992 through the end of 1995.

A. Yes, sir, that's correct.

Q. And it's fair to say that during that time period, you went to almost every meeting of the 42.3 subcommittee?

A. I believe that I went to almost every meeting, yes.

Q. And you also attended some meetings of the JC-42.5 subcommittee during that period, right?

A. I believe that's correct, yes.

Q. And you or other Rambus employees attended some meetings of the JC-16 committee. Is that right?

A. Yes, that's also correct.

Q. Now, during the time period from 1992 through the end of 1995, as you were attending various JEDEC committee and subcommittee meetings, you came to understand that there was a patent policy at JEDEC, correct?

A. Yes, sir, I did.

Q. And one of the ways you learned that is because at every meeting you attended of the 42.3 subcommittee, Jim Townsend started the meeting with a discussion of the patent policy. Isn't that right?

A. I believe that was generally true.

Q. And in the presentation, he talked about the substance of the JEDEC patent policy?

A. I'm not sure I'd characterize it that way. He did -- he did have some slides that he showed that had some policy statement on them which I believe he represented to be either some aspect or maybe all of

the policy. I don't remember exactly what it was that he said. It's been a long time.

Q. Well, he also discussed the disclosure obligation, didn't he?

A. I -- you know, I don't remember precisely. That sounds about right, but it -- it may be that he didn't always.

Q. And as part of the items that he showed that you just referred to, he included something he called the patent tracking list. Isn't that right?

A. I do remember a patent tracking list.

Q. And that was a list of certain items that members had disclosed at committee meetings?

A. I'm not sure that it was only members that had disclosed the items, and I'm not sure it occurred only at meetings, but it did include items that the committee was somehow or another made aware of.

Q. And you recall that that list includes not just patents, but also patent applications?

A. I think it included a few patent applications from my recollection.

Q. Now, in addition to the presentations made by Mr. Townsend and the list of patents and applications disclosed, you also came to learn about the patent policy through the various minutes that were

circulated. Isn't that right?

A. I think that the slides that Mr. Townsend showed were not always but generally affixed to the minutes. It's possible I may have read that portion and gained some additional understanding. I really have a hard time remembering all of that.

Q. But in any event, if you missed a particular meeting where Mr. Townsend had talked about the patent policy, the slides he showed would be attached to the next set of minutes. Isn't that right?

A. Well, I think it -- as a general rule, there were -- those things were attached to the minutes, but I'm not sure they always were.

Q. In any event, you recall receiving minutes from JEDEC during the four years that you were attending meetings. Isn't that right?

A. Yes, I do recall receiving minutes.

Q. Now, the JEDEC committees and subcommittees also had a sign-in sheet at each meeting. Isn't that right?

A. That's my recollection.

MR. OLIVER: May I approach?

JUDGE McGUIRE: You may.

BY MR. OLIVER:

Q. I've handed you a document marked as CX-306.

You recognize this as a sample of one of the sign-in sheets that was used during the time you were attending meetings?

A. You know, it could be, and it may be a different one. I think there were some different sign-in sheets that were used at different points in time. I'm sorry, my recollection of what they said isn't real good these days. It's been a long time since I went to any of those meetings.

Q. Well, you recognize this as a sign-in sheet that was used during at least some of the meetings that you attended. Isn't that right?

A. You mean the top page?

Q. Yes.

A. You know, I just really don't remember. It generally looks like what I remember them looking like, but I can't tell you one way or the other if this sheet was used.

Q. If I could direct your attention to the language in the box above the caption Name, Status, Company, Phone and Fax, and if I could direct you to the text beginning in the second line. It reads, "Subjects involving patentable or patented items shall conform to EIA policy (reverse side). Consult the EIA General Counsel about any doubtful question."

Do you see that?

A. Yes, I do.

Q. Now, in addition to Mr. Townsend's presentations, the slides that he showed, the minutes and the sign-in sheet, you also learned about the patent policy just by attending meetings and watching. Isn't that right?

A. Yes, sir, that's correct.

Q. And during the course of the meetings, other members sometimes disclosed patents and sometimes disclosed patent applications. Isn't that right?

A. In my recollection, the presenters would be the ones that would do that.

Q. Now, when you attended meetings, you often brought a laptop along with you. Isn't that right?

A. Yes, sir, that's correct.

Q. And you often took notes on your laptop during the course of the meeting?

A. Yes, I did on several occasions.

Q. And then you often sent emails back to other individuals at Rambus containing your reflections of the meeting. Is that right?

A. Yes, sir, is that right.

Q. And in addition to you, other people at Rambus also attended some JEDEC meetings?

A. Yes, sir, that's correct.

Q. A Rambus employee by the name of Billy Garrett attended a number of JEDEC meetings?

A. Yes, sir, that's correct.

Q. And on some occasions, David Mooring, a vice president, attended JEDEC meetings?

A. Yes, sir, that's correct.

Q. And on some occasions when Billy Garrett or David Mooring attended such meetings, they also took notes on what happened?

A. I believe that's correct.

Q. And in some cases David Mooring or Billy Garrett also sent emails back to the individuals at Rambus about JEDEC meetings?

A. Yes, sir, that's my understanding.

Q. Now, a number of the emails that you, Billy Garrett or David Mooring sent and circulated within Rambus showed the JEDEC patent disclosure policy in operation, right?

A. You say "in operation." I'm not sure exactly what you mean by that. Could you be a little more precise?

Q. Certainly. A number of the emails that Billy Garrett, David Mooring or you circulated to others within Rambus showed members disclosing patents or

patent applications. Isn't that right?

A. Well, I believe there may have been some notation in those emails that some presenters may have disclosed some patent applications or other people may have disclosed some patents. I think I have a general recollection that that -- were -- that sort of information was in some of the emails.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document that's been marked as CX-672. It bears the caption at the top underneath SDRAM, "Subject: JEDEC Meeting Notes 2/27, 2/28, To: Staff, To: Garrett," and if you look on page 2, the very last word is "Billy."

Do you recognize this as an email that was sent by Billy Garrett?

A. I believe so, yes.

Q. And you were part of the Rambus staff as of February 1992?

A. Yes, sir, I was.

Q. So, you would have received the email at the time that Mr. Garrett sent this?

A. I would expect so, yes.

Q. Now, in this -- strike that.

The email is a summary of the events at the February 1992 JEDEC meeting. Is that right?

A. Well, it's what Mr. Garrett chose to summarize.

Q. Okay. So, it's the events at the meeting that Mr. Garrett thought would be of interest to the members of Rambus. Is that right?

A. Well, I wouldn't say it quite that way. I think this was what Mr. Garrett felt like writing about.

Q. Now, one of the things that Mr. Garrett told everybody back at Rambus from the February 1992 JEDEC meeting is Fujitsu indicated that they do have patents applied for, but they will comply with the JEDEC requirements to make it a standard, with three exclamation points.

Do you see that?

A. Yeah, I see that Fujitsu had submitted a proposal and made that comment attached with it, yes.

Q. So, this, again, is one of the things that Billy Garrett chose to inform all members of Rambus about. Isn't that right?

A. Yes, sir, that's correct.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. I've handed you a document marked as CX-685. It's a one-page document, appears to be an email from David Mooring to a number of individuals, including you.

Do you see that?

A. Yes, sir, I do.

Q. And this email is written in December 1992?

A. That's what the date is on it. I think that's right.

Q. And if you look at the sixth line, the subject is "JEDEC Notes."

Do you see that?

A. Yes, sir, I do.

Q. Now, you recognize this as being an email sent by David Mooring following his attendance at a JEDEC meeting?

A. Yes, sir, I do.

Q. And that was the December 1992 JEDEC meeting. Is that right?

A. Well, it was the December 1992 JEDEC JC-42 meeting. There may have been some other JEDEC meetings that occurred. That's what this one was for.

Q. Okay, fair enough.

You also attended that JC-42 committee meeting in December 1992. Isn't that right?

A. Yes, I was there for at least part of it.

Q. And among others to whom David Mooring sent this email was CEO and president Geoff Tate.

Do you see that?

A. Yes, sir, I do.

Q. Founder and member of the board of directors, Mike Farmwald. Do you see him?

A. Yes, I do, sir.

Q. And the "To" list also includes vice president Allen Roberts?

A. Yes, sir, that's correct.

Q. Now, Mr. Mooring informed these individuals that at the JEDEC meeting IBM raised the issue that they were aware that some voting JEDEC attendees have patents pending on SDRAMs that they have not made the committee aware of. They will come to the next meeting with a list of the offenders.

Do you see that?

A. Yes, sir, I do.

Q. And again, that is one of the items that David Mooring chose to inform others at Rambus, including the CEO and the vice president, Allen Roberts. Isn't that right?

A. Apparently so. It's in his email.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document that's been marked as CX-711. Before we get to this specific email I would like to talk about in this connection, let's talk just for a moment about the origins, if you will, of this document.

This document is a collection of emails that you sent and received between 1993 and 1996. Is that correct?

A. I'm not sure of the actual end dates, but they were generally emails that I either sent or received over some period of time. I think it includes those end dates, but there may be some other ones in here.

Q. Okay. Now, what happened is that you had a number of files on an Apple McIntosh laptop that you wanted to convert to IBM PC format. Is that correct?

A. That's correct.

Q. And you did so by transferring them into the server. Is that right?

A. Yes, that's correct.

Q. And those files were later discovered on the server. Is that right?

A. I think there were some that were discovered on the server.

Q. In any event, what we have here in CX-711 is approximately a 200-page collection of various emails that you sent between 1993 and some period of time that were found on the server. Is that right?

A. Again, I'm not sure of the exact place where they were located, but I generally agree with what you said. I think they're included -- I think some of them were found on the server, and I think some of them were on the IBM laptop.

Q. If I can direct your attention to the very first page of CX-711 and specifically to the caption at the top. Now, do you recognize this as an email that you sent?

A. Yes, sir, I do.

Q. And you sent this email to CEO and president Geoff Tate, to vice president Mooring, and to vice president Roberts. Is that right?

A. Yes, sir, that's correct.

Q. And the email summarizes notes from a JEDEC meeting in Boston, September 22nd. Is that right?

A. Yes, sir, that's right.

Q. And if we look at the top line, I assume that would be September 22nd, 1993?

A. That's the way I'd read that, yes.

Q. Now, in your report to CEO and president Tate,

vice president Mooring and vice president Roberts, you wrote, "TI was chastised for not informing JEDEC that it had a 1987 patent on quad CAS devices. These allow bit write capability which is useful in building x36 SIMMs."

Do you see that?

A. Yes, I do.

Q. Then you write, "The bottom line is that all quad CAS devices will be removed from the standard 21C."

Do you see that?

A. Yes, I do.

Q. Now, 21C is a standard -- is the JEDEC standard that covered SDRAMs, right?

A. I'm not sure what all it covered. I seem to recall that was a fairly thick binder that had a lot of different kinds of standards in it.

Q. Among the things that it covered by October 1993 was SDRAMs. Isn't that right?

A. I would expect that. I don't know that with certainty.

Q. And do you recall that the issue of the Texas Instruments patent came to light at this October 199 -- excuse me, September of 1993 JEDEC meeting because Texas Instruments had sued Micron for patent

infringement? Isn't that right?

A. You know, I generally recall some sequence of events like that. I'm not sure precisely how it came to light, but that sounds approximately what I remember.

Q. Now, when you saw this discussion of Texas Instruments' failure to disclose a patent at JEDEC, that really captured your attention, didn't it?

A. Well, only in the sense that I chose to put this in my report.

Q. Well, after this meeting, after you saw this discussion at JEDEC, you contacted Rambus' patent counsel, Lester Vincent, and asked him to send you copies of the Texas Instruments patents, didn't you?

A. Texas Instruments patents? I don't believe that I asked for that.

Q. You also asked Mr. Vincent to send you a copy of the complaints and the docket sheets from the litigation between Texas Instruments and Micron, didn't you?

A. I had asked him to send me some information regarding litigation between TI and Micron, but I don't believe it had anything to do with this.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-1967. These are handwritten notes of Mr. Lester Vincent. If you see the top lines, "Telecon," standing for teleconference, "w/Richard Crisp," and you'll see on the right-hand side, "October 29, 1993."

Do you see that?

A. Yes, I do, sir.

Q. In other words, this was approximately three weeks after you wrote your email to CEO and president Geoff Tate, vice president Mooring and vice president Roberts describing the discussion at JEDEC concerning the litigation between Texas Instruments and Micron, right?

A. I think that's the right time frame, yes.

Q. And you'll see on the page here Lester Vincent lists a number of TI patents?

A. Yes, sir, I see that.

Q. Do you see six specific patent numbers listed there?

A. Yes, sir, that's correct.

Q. And then underneath that, do you see, "Get copies of complaints and docket sheets in"?

Do you see that?

A. Yes, sir, I do.

Q. And then under that, "Micron sued TI in Boise, Idaho"?

A. Yes, sir.

Q. And even under that, "TI sued Micron Semiconductor in Marshall, Texas."

A. Yes, sir.

Q. And then underneath that, arrow, "Would like copies of complaints."

Do you see that?

A. Yes, sir, I do.

Q. Does that refresh your recollection that in late October 1993 you requested that Rambus patent counsel Lester Vincent provide you with copies of six Texas Instruments patents and complaints in litigation between TI and Micron?

A. It only partially refreshes my recollection. I remember asking Mr. Vincent for him to tell me about the complaints in the TI versus Micron case in Marshall, Texas, because I had a business interest in what the products were that were under suit, because I was interested in using that to help me with my marketing with Micron.

Q. Now, the controversy at JEDEC concerning the Texas Instruments patents on quad CAS continued at the following meetings, didn't it?

A. I don't have any recollection of that. It may have. I just simply don't remember. It's been a long time ago.

Q. Let me ask you to take a look back again at CX-711. It's the collection of emails that I just handed you. If I could ask you to turn, please, to page 15 in CX-711, and I'd like to direct your attention to the bottom of this page.

Do you see that after a break about three-quarters of the way down the page, there's what appears to be a caption for an email?

A. Yes, sir, I see that.

Q. And does that indicate that there was a new email beginning at the bottom of page 15 and carrying over to the following pages?

A. Yes, sir, I believe that's what it indicates.

Q. Now, do you recognize the email at the bottom of page 15 as another email that you sent?

A. Yes, sir.

Q. And this one you sent to CEO and president Geoffrey Tate?

A. Yes, sir, that's right.

Q. And you also sent it to the entire marketing group at Rambus. Isn't that right?

A. Yes, sir, that's correct.

Q. It was sent on March 9, 1994?

A. That's the date on it, yes, sir.

Q. And the subject is, "JEDEC day 2"?

A. Yes, sir, that's right.

Q. If I could direct your attention to the next page, please, page 16, and specifically to the -- to the second paragraph on this page. The first sentence reads, "The meeting opened with a lot of controversy regarding Patents."

Do you see that?

A. Yes, sir, I do.

Q. Does this refresh your recollection that there was continuing discussion of the Texas Instruments and Micron litigation at the March 1994 JEDEC meeting?

A. Yes, sir, it does.

Q. Now, about halfway down the page, there's a sentence that begins, "Micron says the policy."

Do you see that?

A. Yes, sir, I do.

Q. Let me read those couple of sentences.

"Micron says the policy exists due to anti-trust concerns. That if a group of companies wanted to keep out competition they could agree amongst themselves to standardize something that is patented and not license those that they do not want to compete

with."

Do you see that?

A. Yes, sir, I do.

Q. Now, this is a statement that you wrote to CEO Geoff Tate at this time. Isn't that right?

A. Right, this is talking about a JEDEC policy about members testifying in trials.

Q. This is also something that you wrote to the entire marketing group at -- at Rambus?

A. Yes, sir, that's right.

Q. If I could direct your attention to the last sentence that we just read, the statement you wrote is they could agree amongst themselves to standardize something.

Do you see that?

A. Yes, sir.

Q. So, in other words, you were writing about standard-setting activities in this sentence, weren't you?

A. Actually, I'm writing about what Micron said in the meeting, and they were speaking to the issue of people testifying in trials such as the TI-Micron trial. I think I'm just parroting what I heard people say in the meeting.

Q. The two sentences that I just read to you,

there is nothing in there about testifying at trial, is there?

A. I'm sorry, could you ask the question again? Again, the echoes are a problem.

Q. In the two sentences that I've just read for you, there is nothing in those two sentences concerning testifying at trial, is there?

A. Well, they're out of context, sir. I think if you read the few lines ahead of it starting with the number 2, then you see that that's what they're speaking to. But you're right, yes, they are not -- these sentences themselves aren't speaking of testifying at trials, but they're -- they're in the context of that discussion --

Q. And --

A. -- that I have captured in these notes at the meeting.

Q. The sentences do speak about standardizing something. Isn't that right?

A. Yes, sir, that's correct.

Q. And they speak about standardizing something that is patented, right?

A. Yes, sir, that's correct.

Q. And they speak about standardizing something that is patented and then not licensing other

companies. Isn't that right?

A. Yes, that's correct.

Q. Now, it would be fair to say that the discussion that took place within JEDEC concerning this issue would be nasty?

A. I believe that's what I said in here.

Q. And do you recall that -- actually, let me direct your attention about two-thirds of the way down, there's a reference to Sussman.

Do you see that?

A. Yes, sir, "Sussman mentioned"?

Q. Yes.

A. Yes, sir.

Q. Is that Howard Sussman?

A. Yes, sir, that's correct.

Q. Okay. And do you see there that your notes indicate that Mr. Sussman made a motion that TI withdraw from JEDEC pending resolution of the patent issue?

A. Yes, sir, I see that.

Q. And again, these are all events that you chose to report back home to CEO and president Geoffrey Tate and to the entire marketing group. Isn't that right?

A. Yes, sir, that's correct.

Q. Now, at the March 1994 JEDEC meeting, Texas

Instruments requested clarification of the JEDEC patent policy. Isn't that right?

A. Yeah, at this meeting, I believe they -- I think that's what I wrote in here. Either that or I think they were asking for the policy to make some definitions or something like that.

Q. All right.

A. Basic comments about the policy, that's what -- I believe that's what it's fair to say based on this document.

Q. Okay. And do you recall about two months after this meeting, JEDEC's secretary Ken McGhee circulated a response from Mr. John Kelly?

A. I don't know that I have a specific recollection of that.

MR. OLIVER: May I approach?

JUDGE McGUIRE: You may.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-355. It's a document that's on JEDEC letterhead from Ken McGhee to JC-42 committee members dated May 12th, 1994, and if you look on page 2 of this document, you'll see a memorandum to Ken McGhee from John Kelly.

Do you see that?

A. Yes, sir, I do.

Q. Does this refresh your recollection that about two months after the March 1994 discussions in JEDEC, John Kelly prepared a response to Texas Instruments?

A. Yes, sir, I guess it does. I mean, I see the document, and I think it speaks for itself.

Q. The document indicates that it was circulated to all JC-42 committee members, right?

A. Yes, sir, that's right.

Q. If I could direct your attention to the second page, please, and specifically to the second paragraph, and this is a portion of the memorandum written by John Kelly, right?

A. Yes, sir, that's right.

Q. The second paragraph reads, "Written assurances must be provided by the patent holder when it appears to the committee that the candidate standard may require the use of a patented invention." The words "may require" are underlined. "It is not necessary that the committee make a factual determination that the use of the patented invention is, in fact, required to meet the standard."

Do you see that?

A. Yes, sir, I do.

Q. And do you recall that this was Mr. Kelly's response to Texas Instruments following the March 1994

meeting?

A. I have no reason to dispute that. I don't have that specific recollection, but I think the document speaks for itself.

Q. But with respect to the March 1994 JEDEC meeting, without even waiting for Mr. Kelly's response, the JC-42.3 members were asked at that meeting whether they believed the JEDEC patent policy was clear. Do you recall that?

A. Not really.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as JX-19. These are minutes from the JC-42.3 subcommittee meeting of March 9, 1994. First, let me just direct your attention to the first page, about three-quarters of the way down, do you see your name on that list?

A. Yes, sir, I do.

Q. That indicates that you were in attendance at this meeting?

A. Yes, that's correct.

Q. And if I could ask you to turn, please, to page 5. Actually, let me ask you to turn first, please, to page 4. Do you see a heading about a third of the way

down, Patent Policy?

A. Yes, sir, I see that.

Q. And then the second paragraph under that, there's a reference to some TI graphics patents that were shown?

A. Yes, sir.

Q. And the paragraph under that, TI presented a four-page clarification to the committee on their interpretation of the patent policy? Do you see that?

A. Yes, sir, I do.

Q. And then if you look at the following three paragraphs, do you understand that to be a continuing discussion of this issue?

A. I'm sorry, would you ask the question again?

Q. Yes. I ask you to look at the following three paragraphs, that would be the last three paragraphs on page 4 of JX-19, and do you recognize that to be a summary of the continuing discussion of the Texas Instruments patent issue?

A. I think that's accurate. There may have been more, but this is what they chose to put in the minutes.

Q. Well, let me direct your attention to the third to last paragraph on page 4. "Sanyo moved to have TI withdraw from the Committee activity until the legal

aspects of the proposal are reviewed. The motion was tabled."

Do you see that?

A. Yes, sir, I do.

Q. Now, do you recall that at this time the Sanyo representative was Mr. Howard Sussman?

A. Yes, sir, that's correct.

Q. And that -- would it be fair to say that that reflects the same event that was described in your email to CEO Geoff Tate and the marketing group?

A. In which email?

Q. In your March 9, 1994 email to CEO Geoffrey Tate and the marketing group.

A. Maybe I should have a look at it again to make sure that we're speaking to the same email.

Q. Okay, that would be CX-711, and we're looking at the email that begins at the bottom of page 15 and carries over to page 16.

A. Yes, sir, that's right. That was the same event.

Q. And if I could direct your attention back to JX-19, the bottom of page 4.

A. Yes, sir, I'm there.

Q. And the last paragraph on that page reads, "Applicability of patents to use of JEDEC standards was

discussed. The issue is warning, IBM noted. Failure to disclose a patent prevents the Committee from considering the standard."

Do you see that?

A. Yes, sir, I do.

Q. And then if I could ask you to turn to the top of page 5, I believe this refers to the issue I asked you about earlier. That reads, "The Committee was asked if the patent policy is clear."

Do you see that?

A. Yes, sir, I do see that.

Q. And even after that, "The Committee felt it was clear."

Do you see that?

A. Yes, sir, I see that, too.

Q. Now, does this refresh your recollection that even without waiting for any clarification from general counsel John Kelly, committee members expressed the opinion at the March 1994 JEDEC meeting that the JEDEC patent policy was clear?

A. Well, that's what this report says. I'm not sure that the person writing this had any way to know exactly what people thought, but maybe this was a majority of the people or something like that. I really can't speak to that.

Q. Well, you were present at this meeting, weren't you?

A. Well, I'm on the roster, and I think I was present during this portion of it. I -- you know, I just really don't remember this all very well. It's been a long time, sir.

Q. Now, it would be fair to say, wouldn't it, that you also came to understand the JEDEC patent policy as a result of this discussion that we've been looking at as to whether Texas Instruments had made proper disclosures?

A. You know, there were a lot of things that I saw in JEDEC meetings that helped me form my belief as to what the policy was. Perhaps this was one of them.

Q. Now, subsequently, you also received a copy of the JEDEC manual, right?

MR. PERRY: Vague as to which manual, Your Honor.

MR. OLIVER: Your Honor, I can clarify the question.

JUDGE McGUIRE: All right, restate.

BY MR. OLIVER:

Q. Subsequently, you also received a copy of the JEDEC 21-I Manual. Isn't that right?

A. I think it was, you know, more than a year

after this.

Q. But you did receive a copy of the 21-I Manual, right?

A. Yes, sir, that's correct.

Q. While you were still attending JEDEC meetings?

A. Yes, sir, that's also correct.

Q. And what happened was you requested a copy of whatever the users' manual or the members' manual was, right?

A. Yes, sir, that's correct.

Q. And what they gave you was the 21-I Manual, right?

A. I seem to remember that's which -- that's one of the two manuals I was given.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document that's been marked as CX-208A. The document bears numbers towards the lower right-hand corner beginning with R 173458.

Do you see that?

A. Yes, sir.

Q. Let me represent to you that these documents indicate that -- excuse me, these numbers indicate that

this document was produced from Rambus' files. The document bears the title JEDEC Manual of Organization and Procedure, the number 21-I, and the date October 1993.

Now, Mr. Crisp, this is the document that you received from JEDEC, right?

A. I believe that's correct.

Q. Now, when you received CX-208A, you looked through it, right?

A. Yes, sir, I -- I certainly looked through portions of it.

Q. And you read parts of it?

A. Yes, sir, that's right.

Q. And you understood that the JEDEC 21-I Manual required disclosure of not only patents but also patent applications if they related to the work of the committee. Isn't that right?

A. Well, my understanding was the sponsors or the presenters had that obligation.

Q. That's not what you testified to earlier, is it?

A. Maybe you could show me that testimony.

MR. OLIVER: May I approach?

JUDGE McGUIRE: You may.

BY MR. OLIVER:

Q. Mr. Crisp, do you recall being deposed in connection with the Micron litigation?

A. Yes, sir, I recall being deposed on more than one occasion.

Q. Okay. And do you recognize what I've just handed you as your transcript from the August 10, 2001 deposition in the Micron litigation?

A. Yes, sir, I do.

Q. If I could ask you to turn, please, to page 951. I'm going to read to you starting at line 24, carrying over to 952, line 3. The testimony there reads:

"QUESTION: And when you got it and read it then, it was clear that the manual required disclosure of both patents and patent applications, wasn't it?

"ANSWER: Yes, if they related to the work of the committee."

Do you see that?

A. Let me read a little bit of this to get the context of what this was about. (Document review.) Yes, you now may -- yes, the question again, please?

Q. Could you also turn to page 852?

A. Yes, sir.

Q. And I'm going to read to you on page 852 beginning at line 22, turning over to 853, line 4.

A. I'm sorry, I thought we were on 952. 852?
Okay, again, I want to read some more of this so I make sure I have the right context.

Q. Okay.

A. (Document review.) Okay.

Q. And have you had a chance to look at the context?

A. Yes, sir.

Q. Looking at the bottom of page 852 at line 22:

"QUESTION: Okay, based on your reading of 21-I, did you come to some understanding of what the written patent policy was of JEDEC?

"ANSWER: I think I did, yes."

At the top of page 853:

"QUESTION: What was that understanding?

"ANSWER: Well, they wanted to know about both patents and patent applications that might relate to the works that were going on within JEDEC."

That's how you testified in your August 10, 2001 deposition. Is that right?

A. Yes, sir, that's what I testified.

MR. PERRY: Your Honor, rule of completeness requires that we're allowed to put in testimony from 853, 854 and 855 if that's what he's doing.

JUDGE McGUIRE: Right, that is correct. Then

do you choose to do that at this point or if you want you can do it during your cross examination?

MR. PERRY: Your Honor, I'd like to do just one question and answer, if I could.

JUDGE McGUIRE: Go ahead, Mr. Perry.

MR. PERRY: From page 855 --

MR. OLIVER: Your Honor, if I could, with previous witnesses I believe that your ruling has been that that's something that could be done on cross or redirect.

JUDGE McGUIRE: Well, if it's just one question, I'm going to let him go ahead and do it so we can clarify it at this point.

MR. PERRY: Page 855, line 17, Mr. Crisp:

"QUESTION: And what conclusions did you draw from reading that reference to first presentations?"

I believe they're talking about the members' manual.

"ANSWER: That the presenter or the sponsoring company that was making the presentation were asked to reveal at that time any existing or pending or prospective patents that may apply to the proposal at hand."

Thank you.

JUDGE McGUIRE: Okay, noted.

All right, Mr. Oliver, you may proceed.

BY MR. OLIVER:

Q. Mr. Crisp, after reviewing the manual, you understood that patent applications had to be disclosed under JEDEC patent policy. Isn't that right?

A. Well, in some circumstances I did, yes.

Q. Now, when you received the JEDEC 21-I Manual in 1995, that was not the first time that you had seen the language in there about pending patents, was it?

A. Seen the language in where?

Q. In the 21-I Manual.

A. I don't think I testified that I had ever seen the 21-I Manual prior to that date in 1995 when I received it.

Q. No, my question was that you had seen the same language previously, hadn't you?

A. I don't know if I had seen exactly that language. I've seen different JEDEC policies on overhead slides at different points in time, and I've seen drafts and I've seen policies and I've seen drafts of policies and various other things. So, I don't have a specific recollection of seeing precisely that language, but it's possible that I did.

Q. JEDEC published the 21-I version of its manual in October 1993. Is that right?

A. Well, that's the date that's on this -- on this document, and I would assume that it's correct.

Q. But the revisions to the version of the manual published in October of 1993 were discussed at JEDEC meetings during the course of 1992. Isn't that right?

A. What I remember being discussed in 1992 were some proposed policy changes or some clarifications. I think they weren't represented as anything other than drafts that were yet to be approved by the council.

Q. Well, in fact, the new language of the 21-I Manual was shown at the December 1992 42.3 subcommittee meeting, wasn't it?

A. I remember a draft being shown. I'm not sure if that's the exact wording that made it into the manual or not. It's possible that it was. I just simply can't remember.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as JX-14. I'll give you a moment to get settled.

JX-14 is the minutes from the December 1992 JC-42.3 subcommittee meeting.

A. Okay.

Q. Now, you attended the 42.3 subcommittee meeting

in December 1992, right?

A. Yes, sir, that's correct.

Q. In fact, if you look on the first page about two-thirds of the way down the list of names, your name appears there?

A. Yes, sir, that's correct.

Q. Now, David Mooring, the vice president of Rambus, also attended this meeting, didn't he?

A. Well, I believe he did, but I don't -- for some reason, I don't see his name listed on the roster, but -- I mean, I know these rosters weren't always accurate.

Q. You recall that earlier this morning you looked at an email written by David Mooring containing his notes of the December 1992 meeting?

A. That's right. That's why I agreed with you that he attended.

Q. Now, at this December 1992 42.3 subcommittee meeting, Mr. Townsend showed a number of pages from the draft revised manual marked to show changes, didn't he?

A. I'm sorry, I don't remember. Perhaps you could point me to it.

Q. Certainly. If you could turn to page 21 of JX-14. Actually, let me take a step back. Let me put this in context first, and if I could ask you to turn

first, please, to page 3. On page 3, there's an item about halfway down, item number 5, Patent Policies.

Do you see that?

A. Yes, sir, I do.

Q. And that paragraph reads, "A presentation was made on the EIA patent policies by Mr. Townsend (See Attachment A). The tracking list was shown and also the draft of Appendix F of JEP-21H policy manual (See Attachment B)."

Do you see that?

A. Yes, sir, I do.

Q. Now, if I could ask you to turn, please, to page 21 of JX-14. You'll see that this bears a caption Appendix F, Patent Policy Guidelines?

A. Yes, sir, that's what it's entitled.

Q. Does this refresh your recollection that this is one of the slides that Mr. Townsend showed in the December 1992 meeting?

A. I think he did, yes.

Q. And on page 21, if I can direct your attention to the third paragraph, the statement there that reads, "By its terms, the Patent Policy applies with equal force to situations involving the discovery of patents that may be required for use of a standard subsequent to its adoption."

Do you see that?

A. Yes, sir.

Q. And again, this is one of the slides that Mr. Townsend showed at the December 1992 meeting?

A. Yes, sir, we've -- I think we've covered that already.

Q. If I could also ask you to turn, please, to page 25, you'll see on page 25 at the top a caption 8.3, and about three-quarters of the way down, caption 8.3.1.

Do you see that?

A. Yes, sir, I do.

Q. And if I could direct your attention within paragraph 8.3, first of all, you'll see a number of passages with underlining.

Do you see that?

A. Yes, sir, I do.

Q. Does this refresh your recollection that these were the passages that Mr. Townsend was pointing out as being new to the manual?

A. I think that it does.

Q. And within Section 8.3, about halfway through, you'll see a couple of different references to patented or patentable items.

Do you see that?

A. I see Section 8.3. Was there a particular portion -- I'm trying to read this, sir, while you're asking me questions, because I want to be able to make sure I can give you the proper context for the answer.

Q. Sure, let me give you a moment to read it.

A. (Document review.) I've read Section 8.3.

Q. If I could direct your attention to the underlined portion beginning in the seventh line, it reads, "If the committee determines that the standard may require the use of patented or patentable items."

Do you see that?

A. Yes, sir, I do.

Q. And it continues on the next line, with the underlined portion, "the organization holding rights to such patents or patentable items."

Do you see that?

A. I'm sorry, I got lost there. Did you jump a line or two?

Q. I jumped a line to continue with the underlined portions.

A. Now I'm with you.

Q. Okay.

A. It's a little -- the copy is fairly poor, so...

Q. We did the best we could with what we had.

A. I understand. I'm just...

Q. That phrase again reads, "the organization holding rights to such patents or patentable items."

Do you see that?

A. Yes, sir.

Q. And then at the end of that paragraph, a new sentence was added concerning the term "patented."

Do you see that?

A. Where it starts with, "A license will be made"?

Q. No, the very last sentence of the first paragraph, it begins, "The term 'patented'?"

A. Okay, I skipped a few lines. I'm with you.

Q. "The term 'patented' as used in this policy also includes pending patents on items and processes under consideration by a committee, subcommittee or working group."

Do you see that?

A. Yes, sir, I do.

Q. Now, do you recall that that language did, in fact, end up in the final version of the 21-I Manual?

A. Actually, I don't have that recollection, but I imagine we can compare it and see.

Q. If I could ask you to look back at CX-208A, please.

A. I have it in my hands.

Q. And if you could turn, please, to page 19. On

page 19, if I could direct your attention to the second footnote -- actually, let me point out first that the footnote follows from the use of the term "patented item" in the third line of 9.3. Do you see the double star following "patented item"?

A. Yes, sir, I do see that double star.

Q. And then if I could draw your attention to the footnote corresponding, the footnote reads, "For the purpose of this policy, the word 'patented' also includes items and processes for which a patent has been applied and may be pending."

Do you see that?

A. Yes, sir, I do.

Q. Does that refresh your recollection that language substantially similar to the language shown in the December 1992 meeting was incorporated in the final version of the 21-I Manual?

A. You know, I would really have to lay them side by side and read them line by line if you want that level of comparison. I don't -- I'm sorry, I can't remember this well enough from that brief reading of it to say with certainty.

Q. In the interest of time, if I could ask you to move on. If I could ask you to turn back, please, to JX-14, page 25 --

MR. PERRY: Your Honor, we have been going about two hours. I think it might be appropriate, if this is a good stopping point --

JUDGE McGUIRE: All right, Mr. Oliver, I am going to ask you, it's your case, at a point in time where we can stop and take a ten-minute break.

MR. OLIVER: Your Honor, perhaps I can continue for a couple of minutes?

JUDGE McGUIRE: Okay, go ahead.

BY MR. OLIVER:

Q. If I could ask you to turn back to page 25 of JX-14.

A. JX - --okay, I'm sorry. I wasn't seeing anything with that -- okay, got it.

Q. These are the minutes from the --

A. I have them now in my hands, sir.

Q. Okay. I'd like to direct your attention to paragraph 8.3.1 appearing about three-quarters of the way down the page.

A. 8.3.1, I see that, yes.

Q. And let me read the first sentence to you. "The Chairman --" excuse me, "The Chairperson must call to the attention of the members present the requirements contained in EIA Legal Guides, and call attention to the obligation of all participants to

inform the Committee of any knowledge they may have of any patents, or pending patents, that might be involved in the work they are undertaking."

Do you see that?

A. Yes, sir, I do see that.

Q. Now, again, do you recall that identical or substantially similar language was incorporated in the final version of the 21-I Manual?

A. I'm sorry, I don't have that recollection, but we could compare them.

Q. If I could ask you to turn back to CX-208A again, please.

A. I have that in my hands.

Q. And let me direct your attention again to page 19 under paragraph 9.3.1. The first sentence there reads, "The Chairperson of any JEDEC committee, subcommittee, or working group must call to the attention of all those present the requirements contained in EIA Legal Guides, and call attention to the obligation of all participants to inform the meeting of any knowledge they may have of any patents, or pending patents, that may be involved in the work they are undertaking."

Do you see that?

A. Yes, sir, I do.

Q. Thank you, apparently I misread a line, "that might be involved in the work they are undertaking."

A. I missed that, but I'll take your word for it.

Q. Thank you.

A. I still see what you read.

Q. Does that refresh your recollection that the language in draft 8.3.1 shown at the December 1992 meeting was incorporated in identical or substantially similar terms in the final version of the 21-I Manual?

A. Well, it looks like it was.

MR. OLIVER: Your Honor, this would be a good place for a break.

JUDGE McGUIRE: Okay, then, the Court will reconvene in ten minutes. We are now in recess.

(A brief recess was taken.)

JUDGE McGUIRE: At this time, you may proceed, Mr. Oliver.

MR. OLIVER: Thank you, Your Honor.

BY MR. OLIVER:

Q. Now, Mr. Crisp, in addition to the various references that we've been discussing this morning, you were specifically asked about Rambus IP at JEDEC 42.3 subcommittee meetings on at least two occasions. Isn't that right?

A. I'm not sure which occasions you're referring

to. Perhaps you could be a bit more specific.

Q. Okay. Well, let me start by showing you an email.

May I approach?

JUDGE McGUIRE: You may.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-673. Do you recognize this as an email that you wrote?

A. Yes, sir, I do.

Q. And this is your summary of certain events from the JEDEC meeting in May 1992. Is that right?

A. Yes, sir, that's correct.

Q. Okay. By the way, this is an email that you sent to CEO and president Geoffrey Tate, to vice president David Mooring and vice president Allen Roberts. Is that right?

A. Yes, sir, those are the names on the email.

Q. Okay. Let me direct your attention to the fourth line. It begins with number -- or three words in, the number 3.

Do you see that?

A. Yes, sir.

Q. It reads, "Siemens expressed concern over potential Rambus Patents covering 2 bank designs.

Gordon Kelly of IBM asked me if we would comment which I declined." (Sic)

Do you see that?

A. Yes, I do.

Q. Does that refresh your recollection that in the May 1992 meeting you were specifically asked about the Rambus IP?

MR. PERRY: Your Honor, I think "IP" is vague.

JUDGE McGUIRE: Can you restate that question?

MR. OLIVER: Yes.

BY MR. OLIVER:

Q. Does this refresh your recollection that in the May 1992 meeting, you were specifically asked with respect to Rambus' patent position?

A. What I recall in reading this was Mr. Kelley asked me if I'd make a comment regarding the concern that Siemens expressed.

Q. Okay. Now, Mr. Crisp, do you also recall in the May 1995 JEDEC meeting being asked again by Mr. Kelley to state the Rambus patent position with respect to a presentation by SyncLink?

A. Again, if you could give me some documents to look at, I think it would help me understand what I was asked.

Q. I'll tell you what, Mr. Crisp, why don't we

come back to that at a later point in time.

Mr. Crisp, between 1992 and 1995, you also understood the consequences of not disclosing relevant patents or patent applications at JEDEC, didn't you?

A. I'm not entirely sure what exactly you mean by that.

Q. Well, you understood the term "equitable estoppel," right?

A. I had -- I had heard that term before.

Q. And you understood that term could result in a company not being able to enforce patents. Is that right?

A. Well, in cases in which equitable estoppel was applicable, I had understood that it could be used as a defense by someone accused of an infringement.

Q. And you had heard others express concern that Rambus' participation in JEDEC could raise concerns with respect to equitable estoppel. Isn't that right?

A. Again, if you could give me some specific documents, that may help me refresh my recollection.

Q. Okay.

May I approach?

JUDGE MCGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as

CX-1705. It is a copy of a notebook. On the upper right-hand corner there is handwriting reading "Allen Roberts."

Do you see that?

A. Yes, sir, I do.

Q. If I could ask you to turn, looking in the lower right-hand corner, to page 30, or the upper right-hand corner, page 31.

Do you see that page?

A. Yes, sir, I do.

Q. It appears to be Allen Roberts' notes from December 18, 1991?

A. Well, I'm not certain about the year, but I see 12/18 on it.

Q. Underneath that, do you see it says first, "Board meeting," and then two bullet points below that, it appears to read, "JEDEC submission, talk to Richard about creating a plan for JEDEC."

Do you see that?

A. Yes, I do.

Q. Does this refresh your recollection that in or about December 1991 you had a meeting with vice president Allen Roberts to create a plan with respect to JEDEC?

A. No, I'm sorry, it doesn't refresh my

recollection.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-1941 for identification. These are handwritten notes of Mr. Lester Vincent. The top reads, "Teleconference with Allen Roberts, 3/25/92."

Do you see that?

A. Yes, sir, I do.

Q. And if I could direct your attention about halfway down, Roman numeral II, do you see that?

A. Yes, sir.

Q. And next to Roman numeral II, it reads, "JEDEC."

Do you see that?

A. Yes.

Q. Underneath that, "said need preplanning before accuse others of infringement."

Do you see that?

A. Yes, sir.

Q. Then two lines below that, "Advising JEDEC of patent application"?

A. Yes, I do.

Q. Do you see that?

Now, did you have any discussions with Allen Roberts at about this time concerning "need preplanning before accuse others of infringement"?

A. I don't recall any such discussions.

Q. Now, two days after this conference call between Mr. Roberts and Mr. Vincent, you met together with Mr. Roberts and Mr. Vincent in a face-to-face meeting. Isn't that right?

A. I don't have a specific recollection of the meeting. Perhaps you have some documents or something to help refresh me.

MR. OLIVER: May I approach?

JUDGE McGUIRE: You may.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-1942. These are handwritten notes of Lester Vincent. The date is difficult to make out from the copies, but it appears to be March 27, 1992. The top says, "Conf," for conference, "w/Richard Crisp and Allen Roberts."

Do you see that?

A. Yes, I do.

Q. Now, if you look at the first six bullet points, that appears to be information which you and/or Mr. Roberts are filling in Mr. Vincent concerning the

current status. Is that right?

A. I don't have a firm recollection of that. These are some bullet points Mr. Vincent wrote down. I assume that's where it came from.

Q. The first bullet point, for example, reads, "Rambus is a member of JEDEC."

Do you see that?

A. Yes, sir, I do.

Q. The third bullet point, "Rambus attended meeting with 100 others where JEDEC's proposal to establish std," I assume for standard, "for small swing signals for Sync DRAM was discussed."

Do you see that?

A. Yes, I do.

Q. And again, this would be information that either you or Mr. Roberts would be providing to Mr. Vincent, right?

A. I would only assume that, yes, either that or Mr. Vincent already knew it from some other discussion.

Q. Let me direct your attention about halfway down, there's a bullet point after a short space that reads, "I said."

Do you see that?

A. Yes.

Q. Now, again, given that these are Mr. Vincent's

notes, it would be fair to assume that "I" is Mr. Vincent?

A. That's the way I'd interpret it.

Q. The notes read, "I said there could be equitable estoppel problem if Rambus creates impression on JEDEC that it would not enforce its patent or patent application."

Do you see that?

A. Yes, I do.

Q. And then picking up four lines from the bottom, it reads, "But cannot mislead JEDEC into thinking that Rambus will not enforce its patent."

Do you see that?

A. Yes, I do.

Q. Now, does that refresh your recollection that at this face-to-face meeting on March 27, 1992 with Mr. Vincent, Mr. Vincent advised you and vice president Allen Roberts that there could be an equitable estoppel problem if Rambus created the impression with JEDEC that it would not enforce its patents and patent applications?

A. I have no reason to dispute that.

Q. Now, Mr. Vincent raised the issue of equitable estoppel with you again the following year, in 1993. Isn't that right?

A. I'm sorry, I don't have a firm recollection of that.

Q. Mr. Crisp, I've handed you a document marked as CX-1958, a cover letter to you from Mr. Vincent dated May 4, 1993 with an attachment beginning on the second page reading Patents and Industry Standards.

Do you see that?

A. Yes, sir, I do.

Q. Now, this is a letter that -- a handout that Mr. Vincent sent you in May of 1993. Is that right?

A. That's what the date says on it, but I think I've testified previously I don't recall seeing this.

Q. Well, let's take a look at the end note, if we could, if I could ask you to turn specifically to page 12. Do you see that?

A. Yes, sir, I do.

Q. It has a caption at the top, Enforcement of a Patent Involved in an Industry Standard.

Do you see that?

A. Yes, sir, I do see that.

Q. And the second bullet point under that, "Two possible legal theories for nonenforcement: 1, Estoppel? 2, Antitrust?"

Do you see that?

A. Yes, sir, I do.

Q. And the handout also discusses a number of cases relating to equitable estoppel. Is that right?

A. Perhaps we should go over them. Again, I don't have much recollection of this document.

Q. Okay, let me ask you to turn then to page 15, please. There's a caption at the top of that page reading Specific Cases Involving Estoppel.

Do you see that?

A. Yes, sir, I do.

Q. And then underneath that it discusses the Stambler v. Diebold case.

Do you see that?

A. Yes, sir, I do.

Q. And then on that page it sets out, for example, some of the relevant facts?

A. Yes, sir, I do.

Q. And if you turn to the next page, page 16, the caption reads "Stambler v. Diebold (continued)."

Do you see that?

A. Yes, I do.

Q. And on this page, the presentation summarizes the court decision in that case?

A. I can only believe that that's what this is, yes.

Q. And do you see the decision as summarized on

this page, "Plaintiff had a duty to speak out and his silence was affirmatively misleading. Plaintiff could not remain silent while an entire industry implements the proposed standard and then when the standards were adopted assert that his patents covered what manufacturers believed to be an open and available standard."

Do you see that?

A. Yes, sir, I see that.

Q. Does this refresh your recollection that in May of 1993, Lester Vincent sent you some additional information with respect to the legal doctrine of equitable estoppel?

A. You mean additional beyond this?

Q. No, I'm asking whether this refreshes your recollection that Lester Vincent did, in fact, send you this information concerning equitable estoppel.

A. No, I'm sorry, it doesn't refresh my recollection. Again, I think as I -- I had stated earlier, I previously testified I don't recall seeing this document. Either way, I -- you know, it was sent to me, so I have no reason to dispute it. I just simply don't remember the document.

Q. Now, at some point in time between 1992 and the end of 1995, you also had a discussion with Mr. Vincent

in the hallway at Rambus. Isn't that right?

A. I think that happened most likely at least once.

Q. Maybe more than once?

A. It's possible.

Q. And Mr. Vincent again raised the issue of equitable estoppel in the hallway conversation. Isn't that right?

A. I don't have a firm recollection of that. Perhaps you've got some documentation we could go over that may help me remember.

Q. Well, did Mr. Vincent tell you that he didn't think it was a good idea to attend JEDEC meetings?

A. I -- I'm not sure whether he told me that or not. It may have been somebody else.

Q. Now, in September of 1995, a Mr. Anthony Diepenbrock also told you about the risks of equitable estoppel associated with attending JEDEC. Isn't that right?

A. I think Mr. Diepenbrock and I had a conversation where equitable estoppel was one of the things we discussed in connection with industry standards.

Q. Mr. Diepenbrock was an in-house lawyer at Rambus. Is that right?

A. He was hired to be our -- I think our patent portfolio manager or something like that.

Q. But he was an attorney, right?

A. That was my understanding.

Q. And he joined Rambus in September of 1995?

A. You know, I don't remember the date that he joined.

Q. Well, shortly after he started, he told you that attending JEDEC could create a risk of equitable estoppel. Isn't that right?

A. I think he had a concern along those lines.

Q. And he told you that equitable estoppel could result in Rambus losing its ability to enforce its patents against some people. Isn't that right?

A. I don't specifically remember him saying that.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Yes, you may.

BY MR. OLIVER:

Q. I've handed you a document marked as CX-837. This is an email from you to the executive group and also to Tony Diepenbrock. Is that right?

A. Yes, sir, that's right.

Q. And I believe actually this is an email that we looked at briefly this morning already. This is an email that you wrote on September 23rd, 1995?

A. That's what it looks like.

Q. And look at the first sentence. "One other thought I have regarding Tony's worst case scenario regarding estoppel."

Do you see that?

A. Yes, sir, I do.

Q. And "Tony" there refers to Tony Diepenbrock?

A. That's correct, yes.

Q. And the next sentence reads, "The only thing lost is the ability to enforce our rights against those that can prove estoppel applies."

Do you see that?

A. Yes, I do.

Q. Does this refresh your recollection that Tony Diepenbrock explained to you that equitable estoppel could result in Rambus losing the right to enforce its patents against some people?

A. Yes, it -- it apparently does. I have no reason to dispute what I wrote. I don't really remember the conversation. I have no reason to dispute this.

Q. And Tony Diepenbrock also thought that Rambus should not attend JEDEC meetings. Isn't that right?

A. I think he had expressed that opinion to me on at least one occasion.

Q. And then it -- in January of 1996, after the Federal Trade Commission Dell decision came out, there was a big meeting at Rambus to discuss the potential implications for attending JEDEC and IEEE. Isn't that right?

A. I don't know about the date. I don't know what you mean by "big meeting." Perhaps you could be a little more precise.

Q. Well, I'll tell you what, why don't we set that topic aside, and we will reach that topic later.

Your Honor, I've actually reached my potential breaking point a little bit more quickly than I thought, but if you think it's appropriate, this would be a convenient place to break.

JUDGE McGUIRE: Yeah, I think it would be. It's 12:05. Why don't we take a break until 1:30, and then we'll come back. We're in recess.

(Whereupon, at 12:05 p.m., a lunch recess was taken.)

AFTERNOON SESSION**(1:30 p.m.)**

JUDGE MCGUIRE: This hearing is now on the record. Mr. Oliver, you may proceed with your inquiry.

MR. PERRY: May the witness approach?

JUDGE MCGUIRE: Yes, sir, Mr. Crisp, have a seat. Go ahead, Mr. Oliver.

BY MR. OLIVER:

Q. Good afternoon, Mr. Crisp.

A. Good afternoon, Mr. Oliver.

Q. Are you all set?

A. Yes, sir, I am.

Q. Now, Mr. Crisp, during the time that you were attending JEDEC, you came to recognize in part through JEDEC meetings that the industry thought low cost was a critically important factor for DRAMs. Isn't that right?

A. I believe that I was aware that low cost was an important factor for DRAMs before I ever attended a JEDEC meeting.

Q. But you also became aware of that through attendance at JEDEC meetings. Is that right?

A. I don't think it changed my opinion. I used to design DRAMs prior to ever going to any JEDEC meeting.

Q. You understood that a customer might be willing

to leave some performance on the table in order to achieve low cost?

A. Yes, sir, that's correct.

Q. And you also understood that low cost was something that Rambus did not do well? Isn't that right?

MR. PERRY: That's very vague, Your Honor.

JUDGE McGUIRE: Sustained.

BY MR. OLIVER:

Q. You also understood that low cost was something that Rambus did not do as well as some other architects of SDRAM. Is that right?

A. I have a hard time answering that, because I'm thinking about cost versus selling price.

Q. I'll tell you what, why don't we take a look at a couple of documents, then. If you could locate CX-1708, it's in the stack of documents in front of you. This is your notes from the April 1992 meeting.

Actually, Your Honor, I do have another copy if it will save time.

JUDGE McGUIRE: Why don't you approach and give him a copy to save some time.

BY MR. OLIVER:

Q. Mr. Crisp, do you recall that CX-1708 is an email that you wrote at or shortly after the time of

the April 1992 JEDEC task group meeting?

A. Yes, sir, that's right.

Q. It's a document that we looked at briefly this morning?

A. Yes, sir, that's correct.

Q. And again, this is your notes from that April 1992 task group meeting. Isn't that right?

A. That's correct.

Q. I would like to direct your attention on the first page to the last paragraph, the paragraph beginning "IBM." Do you see that?

A. Yes, sir, I do.

Q. The first two sentences, excuse me, read, "IBM also really stressed the need for the parts to be pervasively used from laptop to mainframe. They cited pricing as being the driving force."

Do you see that?

A. Yes, sir.

Q. If I could ask you to turn to the second page, please. And let me direct your attention to the second paragraph, it's numbered 3, it begins, "Compaq." Do you see that?

A. Yes, sir, I do.

Q. That paragraph reads, "Compaq (Dave Wooten) like the others, stressed that price was the major

concern for all of their systems. They didn't particularly seem to care if the SDRAMs had one or two banks, so long as they didn't cost any more than conventional DRAMs."

Do you see that?

A. Yes, I do.

Q. And then the next paragraph, numbered 4, begins Sun. Do you see that?

A. Yes.

Q. And the first two sentences there read, "Sun echoed the concerns about low cost. They really hammered on that point." Do you see that?

A. Yes, I do.

Q. Now, if I could then ask you to turn to the next page, page 3. And if you could look at the top paragraph on page 3, please, that begins, "It really looks like there is a lot of momentum against us in the main memory area." And "against us" in that sentence is referring to Rambus?

A. Yes. Yes.

Q. The paragraph continues, "It seems like the group is pretty set on using the SDRAMs for memory. The things they seem most concerned about (price, latencies, and power) are all things we don't really do well."

Do you see that?

A. Yes, I do.

Q. And one of the reasons that Rambus didn't do well on price was because of license fees. Isn't that right?

A. I think that's one factor.

Q. If I could direct your attention to the third paragraph on page 3 of 1708. The last sentence in that paragraph reads, "It seems unlikely that we are going to be able to do better on price than the SDRAMs (license fees in need of recapture, royalties to be paid, bigger die size)."

Do you see that?

A. Yes, sir, I do.

Q. Mr. Crisp, if I could also ask you to locate CX-711 in the pile in front of you, this is the 200-page compilation of emails that we looked at this morning. Do you have that document in front of you?

A. Yes, I do, sir.

Q. If I could ask you to turn, please, to page 31 of CX-711. If I could direct your attention to the bottom of page 31, to the caption that looks like that's the beginning of another email. Do you see that?

A. Yes, I do.

Q. It looks like the date is July 13, 1994.

A. Yes.

Q. And this, again, is an email that you sent out?

A. Yes, sir, that's right.

Q. And you sent this to all staff at Rambus?

A. That's correct.

Q. And do you recognize this to be a summary of a JEDEC meeting in July of 1994?

A. Yes, sir, that's right.

Q. If I could ask you to turn, please, to page 34 and if I could direct your attention towards the bottom of page 34, beginning with "VLSI comments." Do you see that?

A. Yes, I do.

Q. I would like to explore a few of the comments that you included in this email. It begins, "VLSI comments," immediately below that, "Want the least expensive option." Do you see that?

A. Yes, I do.

Q. And if I could direct your attention down to the next paragraph, that begins, "So there is a spec that has passed ballot that will be sent to council in late September." Do you see that?

A. Yes, sir.

Q. Continuing, "The council is likely to pass the

ballot and will be a standard in late September. The customers (Pentium type users) are saying that 200 pins are too many, the connectors are too expensive, and they want cheap cheap cheap." That's what you wrote, again, in your comment to all Rambus staff. Is that right?

A. Yes, sir.

Q. And then the next paragraph, you summarize here a comment by Desi Rhoden. Do you see that?

A. Yes, sir. I'm just wondering if -- I'm sorry. I was just wondering if you were ready for me to respond or not.

Q. Yes. The sentence begins, "Even Mr. Synch DRAM, Desi Rhoden." Do you see that?

A. Yes, I do.

Q. And then the next sentence says, "His customers tell him they want the cheapest memory solution, period." Do you see that?

A. Yes.

Q. And this is something that Desi Rhoden's customers were telling him?

A. That's correct.

Q. And then let me point to the next paragraph, your conclusion here, "The implication here is that customers are willing to leave performance on the table

in exchange for having lower cost systems."

Do you see that?

A. Yes, sir, I do.

Q. And again, that's what you wrote to Rambus staff following this discussion at the JEDEC meeting. Is that right?

A. That's correct.

Q. Okay, Mr. Crisp, I would like to turn now to a number of specific events that occurred during the course of some of the JEDEC meetings that Mr. Garrett, Mr. Mooring or you attended and then certain other later events occurring then outside JEDEC.

Your Honor, may I approach?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as JX-10. Do you recognize this document?

A. It looks vaguely familiar.

Q. Do you recognize these as the minutes from the December 1991 JEDEC 42.3 committee meeting. Is that right?

A. Yes, sir, that's what they're -- that's what it's entitled.

Q. Now, Rambus was represented at this meeting by Billy Garrett. Is that right?

A. Yes, that's correct.

Q. And in fact, this is the first JEDEC meeting that Rambus attended?

A. That's my understanding.

Q. Mr. Crisp, if I could ask you to find CX-670 in front of you.

A. CX-670 you said?

Q. This is an email from Mr. Garrett, again, that I believe you looked at this morning.

Actually, I do have another copy, if that would save time, Your Honor.

JUDGE MCGUIRE: Okay, go ahead.

THE WITNESS: Thank you.

BY MR. OLIVER:

Q. Mr. Crisp, I have handed you a document marked as CX-670, it has a caption at the top, "Subject: Forwarded mail -- to everyone." And immediately beneath that, "Trip Report Information, JEDEC meeting, December 1991."

Do you see that?

A. Yes, sir, I do.

Q. And if you turn to the second page, at the very end, you see the word "Billy."

A. Yes, sir.

Q. Do you recognize this as an email that Billy

Garrett sent to all Rambus staff following the December 1991 JEDEC meeting?

A. I think that's what it is. I don't really recall the document. I think that's what it is.

Q. You have no reason to believe that that's not what this is, do you?

A. No, sir, I don't. I believe it's as you stated.

Q. Let me direct your attention to the discussion in the text, and specifically if I could direct your attention to about 14 or 15 lines down, there's a reference to NEC followed by a Howard Sussman. Do you see that?

A. Yes, sir, I do.

Q. And do you see the next line after that, Mr. Garrett wrote, "He," referring to Howard Sussman, "held an ad hoc meeting in the last month in Portland, Oregon, with many people attending from HP, Samsung, TI, IBM, Toshiba, Intel and the like."

Do you see that?

A. Yes, sir.

Q. Now, again, this is information that Billy Garrett learned at the JEDEC meeting. Isn't that right?

A. Yes, sir, I believe that's correct.

Q. And then following that, Mr. Garrett informed Rambus employees of the results of Mr. Sussman's meeting in Portland, right?

A. Yes, that's right.

Q. And a few lines below that, he summarizes IBM statements. Do you see that?

A. Maybe you could help me find that. Oh, yes, I see it here on the monitor, yes.

Q. Okay. And then if you look about eight lines below IBM, you'll see a reference to Samsung's proposal. Do you see that?

A. Yes, sir, I do.

Q. And three lines after Samsung's proposal there's a reference to TI. Do you see that?

A. Yes, sir, I do.

Q. And five lines after TI is a reference to Toshiba proposal.

A. Yes, I see that.

Q. And the very next line is a reference to Mitsubishi proposal. Do you see that?

A. Yes, sir, I do.

Q. Now, what you understand was that Billy Garrett was summarizing the various proposals that were being made at this JEDEC meeting. Isn't that right?

A. Yes, that's correct.

Q. And if I could direct your attention towards the top, about 11 lines down, the line that begins at the left-hand side, "Important Points." And after that it reads, "Originals of all the presentations are in folders outside my office." Do you see that?

A. Yes, sir, I do.

Q. So, in other words, if any Rambus employees were interested in having more information about a particular presentation that Billy Garrett summarized here, he or she could get a copy outside Billy Garrett's office, right?

A. Yes, that's what it's indicating here.

Q. Now, before this December 1991 JEDEC meeting was over, Rambus submitted an application for membership at JEDEC, didn't it?

A. I'm not sure.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I have handed you a document marked as CX-601 that bears the caption at the top Electronics Industries Association, underneath that, Application for Membership in Engineering Committees. Do you see that?

A. Yes, I do.

Q. And then on the lower left-hand corner is a box reading, "Name, Company, Address, City, State, Telephone." Do you see that?

A. Yes, I do.

Q. And you see that this has been filled out in handwriting with Billy Garrett's name?

A. Yes, I see that.

Q. And under that is the name of Rambus.

A. Yes.

Q. And the address of Rambus at that time?

A. Yes, that's correct.

Q. If you could turn to the second page, please. Do you see there's some additional information here that's been filled in in handwriting?

A. Yes, I see that.

Q. And at the top left-hand side under alternate member is a person's name that's been filled in. Do you see that?

A. Yes, sir, I do.

Q. I will get this name wrong, so could you please state that name for the record?

A. Satyanarayana Simha.

Q. And who was Mr. Simha?

A. Mr. Simha was a person who I believe worked in the marketing department for a brief period of time

after I joined Rambus.

Q. And underneath that first representative is listed Billy Garrett. Do you see that?

A. Yes, I do.

MR. OLIVER: Your Honor, Complaint counsel moves to admit CX-601 into evidence.

JUDGE McGUIRE: Any objection?

MR. PERRY: No objection.

JUDGE McGUIRE: So entered.

(CX Exhibit Number 601 was admitted into evidence.)

MR. OLIVER: May I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I have handed you a document marked as CX-602, and let me just explain before we start that the document came from the files of JEDEC. The order was perhaps a bit challenging, this is the order which we found the document in. So, if you will simply bear with me, we will try to find the appropriate pages as we go.

MR. PERRY: Your Honor, just to be clear, I believe that these were produced by Infineon in this order, it doesn't come directly from the JEDEC office to the FTC. I think we all got it in Infineon.

BY MR. OLIVER:

Q. Mr. Crisp, if I could ask you to turn to the last page, please, of CX-602. This is a page that appears to be partially cut off on the left-hand side. Do you recognize this, this appears to be an invoice from the Electronic Industries Association.

A. Yes, sir.

Q. That appears to be addressed to Billy Garrett of Rambus.

A. Yes, that's what I see.

Q. And it's an invoice for 1992 JEDEC membership dues.

A. Yes, I see that.

Q. In the amount of \$2,000?

A. Yes, sir.

Q. And underneath that you see "paid in full per check number 002514 dated December 5, 1991." Do you see that?

A. Yes, sir, I do.

Q. Does this refresh your recollection that Rambus joined JEDEC as a member before the conclusion of the December 1991 meeting?

A. I'm not sure that I ever had that recollection, sir, but it certainly appears that that's what happened.

Q. Now, Mr. Crisp, this morning I believe we looked at a page from the notebook of Mr. Allen Roberts. Do you recall that?

A. Yes, sir, I remember that.

Q. And it appeared to be a page from mid-December in the notebook?

A. I'm not sure what the date was.

Q. Based on the various documents that you have seen this morning, do any of those documents refresh your recollection in any way as to a meeting that you had with Mr. Roberts in mid-December 1991 concerning JEDEC?

A. No, sir, I don't. I don't recall such a meeting.

Q. Mr. Crisp, I would like to return now to the December 1991 JEDEC meeting. I would like to look at certain of these presentations in more detail. Do you still have JX-10 in front of you? JX-10, again, would be the meeting minutes from the 42.3 committee meeting in December 1991.

A. I'm looking for it.

Q. Your Honor, I have another copy.

A. I have it.

JUDGE McGUIRE: He's got it.

BY MR. OLIVER:

Q. Mr. Crisp, if I could ask you to turn to page 64, please, in JX-10. This is a page with what appears to be a Texas Instruments logo in the upper left-hand corner. Do you see that?

A. Yes, sir, I do.

Q. And do you see that this particular page Texas Instruments was making a proposal related to a 16 Megabit Synchronous DRAM with GTL I/O.

A. Yes, sir, I see.

Q. And if I could direct your attention to the second bullet point which reads, "Low voltage swing for improved" -- I believe that says "EMI." Do you see that?

A. Yes, I do.

Q. If I could ask you to turn to the next page, page 65 of JX-10. Again, a similar page. If I could direct your attention to the second bullet point on that page, again, it reads, "Low voltage swing for improved EMI." Do you see that?

A. Yes, sir, I do see that.

Q. I would like to follow this reference for just a bit if I could. I would like you to turn back to CX-670 again, this is the email notes that we were looking at just a moment ago.

A. What's the number again, sir?

Q. CX-670.

A. Yes, I have it.

Q. If I could direct your attention to Mr. Garrett's discussion of the Texas Instruments presentation, it appears probably about three quarters of the way down the page is a reference that begins, "TI, most important points."

A. Yes.

Q. And his summary here reads, "TI, most important points, RAS and CAS precharges to be hidden, clock enable, high speed GTL interface (low voltage output swings)." Do you see that?

A. Yes, sir, I do.

Q. So, in other words, Billy Garrett included in his summary of the Texas Instruments presentation TI's desire to use low voltage output swings, right?

A. Yes, sir, that's what he wrote down.

MR. OLIVER: Your Honor, I would like to compile a list, as we go, if we could, of various technologies that Rambus representatives observed being presented at JEDEC.

JUDGE McGUIRE: Okay, go ahead.

MR. OLIVER: Your Honor, let me try a different marker.

JUDGE McGUIRE: Yeah, that one looks a little

dry. Those tax cuts are at work it looks like.

MR. PERRY: We have some private enterprise markers, Your Honor, if we could help out.

JUDGE McGUIRE: Okay.

MR. OLIVER: Thank you very much.

MR. PERRY: Sure.

BY MR. OLIVER:

Q. And again, Mr. Crisp, according to Mr. Garrett's email of December 1991, he made the full presentation available to Rambus staff outside his office, right?

A. That's what the email indicates.

Q. Mr. Crisp, next I would like to show you a document marked as CX-1932.

May I approach, Your Honor?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I have handed you a document marked as CX-1932. These, again, are handwritten notes of Mr. Lester Vincent dated December 17, 1991. It reads, "Telecon" from the top, for teleconference, "w/ Jim Gasboro." Mr. Crisp, as of December 1991, who is Jim Gasboro?

A. He was one of the design engineers that worked for Rambus.

Q. If I could direct your attention to the text appearing starting four lines down, it's a section that reads, "Old patent application, Allen Roberts, low swing signals on DRAM." Do you see that?

A. I'm sorry, could you say again what that says?

Q. Yes, I'm starting four lines down.

A. Yes.

Q. "Old patent applications, Allen Roberts, low swing signals on DRAM."

A. Yes, I see that.

Q. Do you recall having any discussions with Allen Roberts in December of 1991 concerning Rambus's old patent application and low swing signals on DRAM?

A. I vaguely remember having a conversation with Mr. Roberts about that.

Q. In fact, during December of 1991, you discussed with Allen Roberts the possibility of amending Rambus's patent applications to include low swing signals. Is that right?

A. I believe that's correct, yes.

Q. And after the meeting between -- excuse me, after the conference between Mr. Gasboro and Mr. Vincent, you also discussed directly with Lester Vincent your desire to amend Rambus's patent applications to include claims covering low swing

signals, right?

A. What I recall was making a suggestion to Mr. Vincent that if we had not made claims in that area that I thought that we had already invented that, or Dr. Farmwald and Horowitz did. It would seem to me to be something that I wanted him to check to see if we had such claims, and if we didn't, we should have such claims.

Q. So, in other words, if Rambus did not have such claims pending, you were suggesting that Lester Vincent add claims to cover that, right?

A. Yeah, provided that they were adequately supported in the Farmwald and Horowitz patent application. That's correct.

Q. Were you aware that January 31st, 1992, Lester Vincent, in fact, sent a preliminary amendment to Mr. Farmwald relating to low voltage swing?

A. I don't really remember that.

MR. OLIVER: Your Honor, complaint counsel moves to admit CX-1932.

JUDGE McGUIRE: Any objection?

MR. PERRY: No objection.

JUDGE McGUIRE: So entered.

(CX Exhibit Number 1932 was admitted into evidence.)

BY MR. OLIVER:

Q. Mr. Crisp, I would like to show you a document marked as CX-1936.

May I approach, Your Honor?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, CX-1936 consists of a fax page with the Blakely Sokoloff letterhead in the upper right-hand corner, and then in writing, "delivered to Michael Farmwald." And then if I could direct your attention to the bottom of the second page and the top of the third page, you'll see there -- starting at the bottom of the second page, "Please add the following claims."

Do you see that?

A. Yes, sir, I do.

Q. Underneath that, number 151, "A complementary metal oxide semiconductor." Do you see that?

A. Yes, I do.

Q. And then if you look over to the top of page 3, a subitem B refers to "Bus line driver coupled to a line of a multiline bus for producing a low voltage swing signal." Do you see that?

A. Yes, I do.

Q. Does CX-1936 refresh your recollection that as of January 31st, 1993, Mr. Vincent sent a draft claim

relating to low voltage swings to Mr. Farmwald? I'm sorry, 1993.

A. I'm really not sure that I ever knew this. It doesn't help me remember it better.

MR. OLIVER: Your Honor, complaint counsel moves to admit CX-1936.

MR. PERRY: No objection.

JUDGE McGUIRE: Entered.

(CX Exhibit Number 1936 was admitted into evidence.)

BY MR. OLIVER:

Q. Now, Mr. Crisp, on February 27th, 1992, you and Allen Roberts met with Mr. Vincent, right?

A. I don't remember.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, handing you a document that's been marked as CX-1930, these consist of certain green sheets or billing records of Mr. Lester Vincent. I would like to ask you to turn, please, to page 22 and I must admit that it's extremely difficult to read this. We'll see if we can find a more legible version on the computer.

Mr. Crisp, if you look on the computer screen,

it might be slightly easier to read. There's a reference towards the bottom of page 22 for the entry February 27, 1992, Lester Vincent. Do you see that?

A. Yes, I do, sir.

Q. And the description next to that, "Conference with Allen Roberts and Richard Crisp concerning preliminary amendment, including travel from meeting." Do you see that?

A. Yes, I do.

Q. Does that refresh your recollection that you and Mr. Roberts met with Mr. Vincent on February 27th, 1992?

A. It really doesn't help me remember it, but I have no reason to dispute that we had the meeting, I just don't remember it.

MR. OLIVER: May I approach, Your Honor?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I have handed you a document marked as CX-3102. The first page reads, "Rambus v. Hitachi, File Wrapper 5,473,575." Do you see that?

A. Yes.

Q. If I could have you turn in the document to the page 171, please.

I'm sorry, could we have just a moment, Your

Honor?

JUDGE McGUIRE: Yeah, let's go off the record for a moment.

(Discussion off the record.)

JUDGE McGUIRE: On the record.

BY MR. OLIVER:

Q. Thank you, Your Honor.

If I could ask you to turn, please, to page 171 of CX-3102. You'll see that this page has a stamp in the upper right-hand corner that next to that reads, "In the United States Patent & Trademark Office" and about two-thirds down the middle of the page says "Preliminary Amendment."

Do you see that?

A. Yes, I do.

Q. If you look in the lower right-hand corner it has a stamp and in the middle of that is a typed date, March 5, 1992. Do you see that?

A. Yes, I do.

Q. And again, directing your attention to the bottom portion of page 171, carrying over to the top of page 172, it reads, "Please add the following claims," 151 is crossed out and written in "A complementary metal oxide semiconductor (CMOS) dynamic random access memory (DRAM) coupled to a multiline bus, wherein a

first line of the multiline bus is a terminated transmission line, the CMOS DRAM comprising: (A) a CMOS memory array; (B), a bus line driver for producing a low voltage swing signal."

Do you see that?

A. Yes.

Q. Does this refresh your recollection that on March 5, 1992, Mr. Lesser Vincent filed a preliminary amendment with the Patent & Trademark Office adding a claim relating to the low voltage swing signal?

A. No.

Q. Mr. Vincent, I would like to turn back now to the JEDEC meeting of December 1991. Now, can you locate again in front of you JX-10, which again is the set of JEDEC meeting minutes from December of 1991.

A. I think I'll be able to. Yes, I've got them.

Q. Mr. Crisp, if I could ask you to turn within JX-10 to page number 50. In the upper left-hand corner is the handwritten number 40, the lower right-hand corner, number 50. The top of this page reads, "High Bandwidth DRAM, Portland, Oregon; 10/24/91." Do you see that?

A. Yes, sir, I do.

Q. And if I could direct your attention to the second item in that list, which reads, "The latency of

data to the clock should be programmable." Do you see that?

A. Yes, sir, I do.

Q. Under that, "Implied setup with WCBR equivalent."

A. Yes, I see that.

Q. And if you could keep that page handy, if I could ask you to find again CX-670. 670 is Mr. Garrett's email from December 1991.

Your Honor, may I approach?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Do you have it?

A. Oh, yes, I have it.

Q. In CX-670, I would like to direct your attention about 14 lines down, "NEC, Howard Sussman," we looked at that line earlier. Do you see that?

A. Yes, I do.

Q. And then underneath that, "Held an ad hoc meeting in the last month in Portland, Oregon," and as we discussed earlier, Mr. Garrett then summarized some of the comments from that meeting. Do you see that?

A. Yes, I do.

Q. About four lines below that under Howard Sussman, number 2 reads, "Latency should be

programmable." Do you see that?

A. Yes, I do.

Q. In other words, in comparing page 50 of JX-10 with page 1 of CX-670, do you see that page 50 of JX-10 reporting the results of Portland, Oregon, number 2, "The latency of data to the clock should be programmable."

A. Yes, I see that.

Q. And that appears to match up with the statement of Mr. Garrett on page 1 of 670, "Latency should be programmable." Do you see that?

A. Well, it looks pretty similar, but they are slightly different.

Q. But it would appear that in Mr. Garrett's email, number 2, "Latency should be programmable," he is referring to the second item on the list of page 50 of JX-10?

A. Yeah, that's what it looks like.

Q. Then on page 50 of JX-10, if I could direct your attention down to point number 5, it reads, "Burst sequence (Intel and Motorola) and wrap length should be programmable." Do you see that?

A. Yes, sir, I do.

Q. And returning now to page 670, looking about three lines further on from where we just were, number

5 reads, "Burst sequence and wrap length should be programmable." Do you see that?

A. Yes, I do.

Q. And again it appears that on page 1 of 670 Mr. Garrett was summarizing the point to number 5 on page 50 of JX-10.

MR. PERRY: Your Honor, it seems to me that we're wasting time. We're asking him to compare two documents that are in the record, just to say the language is the same, and I think it's irrelevant.

JUDGE McGUIRE: Any response, Mr. Oliver?

MR. OLIVER: Your Honor, I'm trying to establish, again, Mr. Crisp as the recipient of this email would recognize that the items that Mr. Garrett is summarizing in this email are, in fact, the ones that were discussed at the JEDEC meeting. I'm almost completed this, Your Honor.

JUDGE McGUIRE: All right, go ahead, you may continue.

MR. OLIVER: Could you please read the last question back.

(The record was read as follows:)

"QUESTION: And again it appears that on page 1 of 670 Mr. Garrett was summarizing the point to number 5 on page 50 of JX-10."

THE WITNESS: That's what it looks like he's got here.

BY MR. OLIVER:

Q. Mr. Crisp, if I could ask you to turn, please, to page 53 of JX-10. That's a page with the caption Configuration. Do you see that?

A. Yes, sir.

Q. And directing your attention to the right-hand side, "Column access" -- excuse me, "Column address latency," there are four listings there, one clock period next to 01, two clock periods next to 10, three clock periods next to 11, four clock periods next to 00.

Do you see that?

A. Yes, sir, I do.

Q. And do you recognize -- strike that.

At the time that you received the email from Mr. Garrett, and Mr. Garrett made the minutes from the December 1991 meeting available to staff, you understood, didn't you, that JEDEC was proposing to use programmable CAS latency in its next standard?

A. I'm not sure at what point I actually realized that, but it must have been after that.

Q. You would dispute, wouldn't you that what Mr. Garrett was describing in his email was CAS latency?

A. It -- was that his item number 5? I'm sorry?

Q. His item number 2.

A. His item number 2. Yes, sir, I think that's what that was speaking to.

Q. And item number 5 of Mr. Garrett's email referred to programmable wrap length? Would that be right?

A. That's what Mr. Garrett says in here, burst sequence and wrap length should be programmable.

Q. And wrap length is also known as burst length. Is that right?

A. I think I've heard those words used interchangeably. I personally find some technical problems with that, but it's good enough for purposes of discussion.

MR. OLIVER: Your Honor, may I approach the table?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. I would like to add what Mr. Crisp identified as programmable CAS latency and programmable wrap/burst length. Would that accurately reflect your testimony?

A. I'm sorry, add that to what?

Q. To the list of items on the table here.

A. Sure.

Q. Mr. Crisp, I would like to turn next to the February 1992 JEDEC meeting, if we could.

May I approach, Your Honor?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Now, Mr. Crisp, in February of 1992, Mr. Garrett attended the next regularly scheduled 42.3 subcommittee meeting, right?

A. I don't know.

Q. I have handed you a document marked as JX-12. Do you recognize this as the minutes from the February 1992 JEDEC 42.3 subcommittee meeting?

A. Yes, sir, I believe that's what this is.

Q. And Mr. Crisp, if you could locate in front of you CX-672, that's a document I believe we looked at this morning, I believe it was Mr. Garrett's email from the February 1992 JEDEC meeting. Actually, Mr. Crisp, I do have an extra copy here, if I may approach.

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, do you see at the top of CX-672 the caption Subject: JEDEC meeting notes, 2/27-2/28, to staff to Garrett.

A. Yes, sir.

Q. And underneath that, it says, "JEDEC 42.3

meeting, Seattle, Washington, February 27-28, 1992."

A. Yes.

Q. Attended by Billy Garrett." Do you see that?

A. Yes, I do.

Q. Does that refresh your recollection that Mr. Garrett attended the regularly scheduled JEDEC 42.3 subcommittee meeting in February of 1992?

A. Yes, sir, it does.

Q. Now, as of February 1992, Rambus had, in fact, become a full member of JEDEC, right?

A. I think that's right, yes.

Q. And at the February 1992 meeting, Mr. Garrett saw Mr. Townsend make a presentation of the JEDEC patent policy, right?

MR. PERRY: Your Honor, speculation as to whether or not he saw him do anything in the meeting.

JUDGE McGUIRE: Sustained.

BY MR. OLIVER:

Q. Mr. Crisp, let me direct your attention to page 5 of JX-12. Now, let me direct your attention to item 6 in the middle of the page. It bears the caption beginning "Patent Presentation." Do you see that?

A. Yes, sir, I do.

Q. Underneath that it reads, "The EIA patent policies were shown by Mr. Townsend (see attachment C).

A patent tracking list was also shown (see attachment D)." Items referencing updated work, there's a reference to Siemens, another reference to Siemens, a third reference to Siemens, and a reference to Texas Instruments. Do you see that?

A. Yes, I do.

Q. Do you recall having any discussions with Mr. Garrett pertaining to patent prosecution -- excuse me, pertaining to patent presentation at the February 1992 JEDEC meeting?

A. No.

Q. Now, again, after the February 1992 JEDEC meeting, Mr. Garrett reported back to all staff at Rambus concerning events at that meeting, right?

A. Yes, that's what his email shows.

Q. And that email to all staff would also have gone to Rambus executives?

A. Yes, sir, I think so.

Q. By the way, this is the same email we looked at this morning that contains the reference to Fujitsu indicating that they have patents applied for. Do you recall that?

A. Yes, I think that was in connection with them making a presentation on their -- one of their packages. Yes, that's right, I see it here.

Q. If I could direct your attention down to the ninth line. Mr. Garrett reports back, "The expectation is that people are moving rapidly towards a consensus on SDRAMs. Howard Sussman from NEC is really pushing this issue hard, and wants to get consensus in the next few meetings."

Do you see that?

A. Yes, I do.

Q. And then after that, Mr. Garrett discusses some of the technical presentations that were made at that meeting, right?

A. I probably need to read this in order to answer your question. Is that what you want me to do?

Q. Go ahead and take a moment to look at this document.

A. Thank you.

Q. Have you had a chance to look at CX-672?

A. Yes, I have.

Q. And you realize that in the text of CX-672, Mr. Garrett summarizes a number of technologies that were presented or discussed at the February 1992 JEDEC meeting?

A. Yes, sir, I -- that's what it appears that he's done.

Q. If I could direct your attention about a third

of the way down, at the left-hand margin, the line begins, "Many were interested in GTL." Do you see that?

A. I see that.

Q. Let me read a short passage if I could, "Many are interested in GTL for the highest speed SDRAMs, but they realize that this won't fit in a 34 pin SOJ package. As for I/O, everyone agrees that at about 100 megahertz, signals will have to be terminated, that it cannot be rail-to-rail, and that it cannot rely on an internal Vref (i.e., that there would be an external Vref.)"

Do you see that?

A. Yes, sir, I do.

Q. Now, you understood at this time that Vref refers to a reference voltage?

A. That's the way I would interpret that, yes.

Q. And Billy Garrett states that if we cannot rely on an internal Vref, that there would be an external Vref. He was indicating that there would be an external reference voltage. Is that right?

A. Well, I think what he was saying was that that's what he had heard people discussing at the meeting.

Q. So, in other words, he had heard people

discussing an external reference voltage?

A. That's how I interpret this.

MR. OLIVER: Your Honor, if I could approach the table again.

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, if I could then direct your attention down towards the bottom of the first page, beginning the fourth line from the bottom, towards the right-hand side, it reads, "What has happened in the last week borders on remarkable." Do you see that?

A. Yes, sir.

Q. And Mr. Garrett here is commenting on the developments that have taken place within JEDEC during this week?

A. Yes.

Q. And then it follows, "There is general agreement on two banks." Do you see that?

A. Yes.

Q. You also understood that as a so-called dual bank design?

A. Yes, sir.

Q. And again, that would indicate that Billy Garrett had observed presentations or discussions at the February 1992 JEDEC meeting regarding these two

banks?

A. I think that's what it must mean.

MR. OLIVER: Your Honor, may I approach the table again?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Now, Mr. Crisp, if you look about two-thirds of the way down page 1 of CX-672, you see that Mr. Garrett again discussed reduced voltage swing parts. Do you see that?

A. I'm not sure where you're speaking to.

Q. About two-thirds of the way down, the left-hand margin, there's an end of a sentence that reads, "Later than that." And then the new sentence begins --

A. Yes, I see that.

Q. Do you see that?

A. Yes, I do see it.

Q. And Mr. Garrett again informed all Rambus staff, including executives, that the committee is going to work hardest on an LVTTL 3.3 volt supply standard first, but provide quick (i.e., six months) standards for emerging for reduced voltage-swing parts." Do you see that?

A. Yes, sir, I do.

Q. And then Mr. Garrett goes on to comment, again

to Rambus executives, and Rambus staff, "We could influence the voltage standard if we want, or we could use our patents to keep the current-mode interfaces off of DRAMs (assuming that is what we patented it that way and that is what we want to do)."

Do you see that?

A. Yes, sir, I do.

Q. Mr. Garrett then went on in February of 1992 to tell everyone at Rambus that SDRAMs would happen, right?

A. That was -- yes, that's what he said next.

Q. And he informed everyone that it may even happen sooner than Rambus wants it to. Is that right?

A. That's what he said next.

Q. Now, in the week after this meeting, Mr. Vincent filed the preliminary amendment on the application concerning low voltage swing signals. That was the Exhibit CX-672 from a moment ago. Do you recall that?

A. Yes, I do.

Q. And then later in that same month, in March of 1992, you met Mr. Lester Vincent to discuss low voltage. Do you recall that discussion this morning?

A. Vaguely.

Q. Why don't we find Mr. Vincent's notes again to

help refresh your recollection. That's CX-1941.

Actually, Your Honor, I do have another copy.

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I have handed you the notes from Mr. Vincent concerning his teleconference with Allen Roberts two days before your meeting. This was the document which Mr. Vincent noted JEDEC said need preplanning before other infringement. Do you recall seeing that this morning?

A. Yes, I do remember that.

Q. And then if we could find CX-1942. Again, I do have another copy.

A. Thank you, that would be helpful.

Q. CX-1942 is Lester Vincent's notes of the meeting with you and Mr. Roberts, right?

A. Yes, sir, that's right.

Q. And this is the document we looked at this morning?

A. Yes, sir, I believe that's correct.

Q. And this reflects the meeting that you and Mr. Roberts had with Mr. Vincent at which Mr. Vincent informed you that there could be an equitable estoppel problem if Rambus creates the impression on JEDEC that it would not enforce its patent or patent applications.

A. Yes, sir.

Q. Isn't that right?

A. Yes, sir, that's correct.

Q. Now, at the said meeting of March 27th, 1992, this is the meeting in which you and Mr. Roberts explained Rambus's involvement at JEDEC to Mr. Vincent, right?

A. You know, it looks like that's what we talked about. I don't know if this was the first time that was ever discussed and I don't think that's all we talked about.

Q. Well, one of the things you did talk about at that meeting was small swing signals for Sync DRAM, right?

A. Yes, sir, that's what Mr. Vincent's notes indicate.

MR. OLIVER: Your Honor, may I approach the table?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Do you recall from the December 1991 meeting that one of the technologies that Mr. Garrett was discussing was low voltage output swings?

A. I think he heard that discussed there, yes.

Q. And then in the March 27, 1992 meeting with Mr.

Vincent, there's statements to the effect that Rambus attended meeting with hundred others where JEDEC's proposal to establish standard for small swing signals for Sync DRAM was discussed. Do you see that?

A. Yes, I do see that.

Q. And again, the meeting with Mr. Vincent that took place shortly after Mr. Vincent actually filed a preliminary amendment concerning low voltage output swings, right?

A. Yeah, he had filed some sort of an amendment that was -- that was directed in that area.

Q. Now, approximately a week after this meeting with Mr. Vincent in March 1992, you requested that Mr. Vincent send you copies of the abstracts of the Rambus patent applications that had been filed so far, right?

A. I don't remember the date, I do remember asking him to send me some abstracts of our patent applications that had been filed.

MR. OLIVER: May I approach?

JUDGE McGUIRE: You may.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-1944, this, again, consists of notes of Mr. Vincent. The caption at the top reads "Telecon," for teleconference, Richard Crisp, the date in the upper

right-hand corner appears to be April 1, 1992, it reads, "Abstracts: Fax abstracts of patent applications to Richard Crisp."

Does this refresh your recollection that you requested that Mr. Vincent send you abstracts of the Rambus patent applications on about April 1st, 1992?

A. Yes.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-1945, it is a letter on Blakely Sokoloff letterhead, the date April 7, 1992. It reads, "Dear Richard, in response to your request, we have attached the abstracts of the following Rambus patent applications that have thus far been filed."

Do you see that?

A. Yes, I do.

Q. And the list continues on to the second page?

A. Yes, that's correct.

Q. Does this refresh your recollection that Mr. Vincent faxed you copies of the abstracts on April 7, 1992?

A. Yes. Yes, it does.

Q. Now, two days after receiving these abstracts

from Mr. Vincent, you attended your first JEDEC meeting, right?

A. I'm not really sure what the date was.

Q. At any rate, you attended a JEDEC task group meeting in April of 1992?

A. The date sounds about right, I don't remember the exact date.

Q. Now, that task group meeting was related to JEDEC's SDRAM standardization effort, right?

A. Yes, I think that's what their goal was.

Q. And one of the purposes of that special meeting was to break out the memory group and to get focused specifically on the core issues of SDRAMs. Isn't that right?

A. I'm sorry, I don't remember. I don't remember all of what you said as being the goal of the meeting.

Q. It was a goal of the meeting to focus on a smaller group of individuals. Is that right?

A. I think that's right. You know, I remember going to the meeting, I just don't remember everything that they were trying to do there, or just talking about SDRAM standardization.

Q. But you do recall the focus of the meeting was SDRAM standardization?

A. Yes, that was my recollection of it.

Q. And at that meeting, a lot of different features were discussed for SDRAM standard?

A. I don't remember a lot of what was in the meeting. I'm sorry.

Q. Mr. Crisp, if I could ask you to find CX-1708, please, and unfortunately we are out of copies.

A. Could you tell me what the document is and how thick it is.

Q. This is an email that you wrote in April of 1992. It is a seven-page document.

A. 1708, yes, I have it.

Q. Again, we looked at this document this morning, but these were notes that you wrote at or shortly after the April 1992 JEDEC meeting?

A. Yes, sir, that's right.

Q. And again, these are notes that you would have sent to others within Rambus?

A. Yes, sir, that's right.

Q. Mr. Crisp, let me direct your attention to the second paragraph of CX-1708, it begins, "The IBM folks." Do you see that?

A. Yes, sir, I do.

Q. It reads, "The IBM folks (led my a contingent of three very sharp technical guys from Boca, Austin and Burlington (John Szarek, William Hardell and Mark

Kellogg) really contributed heavily to the discussion. The Hardell from Austin had a proposal for what was basically an asynchronous DRAM with a dual edge triggered output register."

Do you see that?

A. Yes, I do.

Q. Does this refresh your recollection that at the April 1992 meeting, IBM, in fact, presented a proposal for an asynchronous DRAM with dual edge triggered output?

A. Yes, it does.

MR. OLIVER: Your Honor, if I could approach the table.

JUDGE McGUIRE: Go ahead.

MR. PERRY: Your Honor, I don't think that one is fair, number 6, because it doesn't capture the document.

JUDGE McGUIRE: You can go into that on cross examination.

BY MR. OLIVER:

Q. Mr. Crisp, if I could also direct your attention to on page 2 of CX-1708, and specifically to paragraph 6 at the bottom of the page. Do you see a reference there, "Hitachi brought up the issue of source synchronous clocking." Do you see that?

A. Yes, I do.

Q. Now, does this refresh your recollection that there was discussion of source synchronous clocking at this April 1992 meeting?

A. Yes.

MR. OLIVER: Your Honor, if I may approach the table?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Now, at the April 1992 special task group meeting, participants also discussed a programmable mode register, right?

A. They may have, I don't actually recall.

MR. OLIVER: May I approach?

JUDGE McGUIRE: You may.

BY MR. OLIVER:

Q. Mr. Crisp, I have handed you a document marked as CX-34, which consists of the minutes of the May 1992 42.3 subcommittee. Within this document, if I could ask you to turn, please, to page 30. There's a handwritten notation there at the right-hand corner, attachment E. Do you see that?

A. Yes, sir.

Q. And do you recognize this as the first page of a set of minutes of the April 1992 task group meeting?

A. That's what it looks like.

Q. If I could direct your attention, please, to page 33. And there, if I could direct your attention specifically to Roman numeral II.A. This presentation appears to be by NEC. Do you see that?

A. Yes, sir, I do.

Q. And if you look at what I believe is the ninth line reads, "Programmable wrap 1, 2, 4, 8, full page and burst." Do you see that?

A. Yes, sir.

Q. And if you look below that, II.B, Fujitsu.

A. Yes, sir, I see that.

Q. And I believe the fourth line reads, "Programmable wrap and burst of 1, 4, 8, full page length."

A. Yes, sir, I see that.

Q. There are others, I don't believe I need to go into more, but does that refresh your recollection that at the April 1992 task group meeting, there was a discussion of programmable register -- programmable burst length?

A. Yes, sir.

MR. OLIVER: Your Honor, this might be a convenient place for a break.

JUDGE McGUIRE: All right, very good, let's

take a 10-minute break. Off the record.

(Whereupon, there was a recess in the proceedings.)

JUDGE McGUIRE: On the record. All right, Mr. Oliver, you may proceed.

BY MR. OLIVER:

Q. Thank you, Your Honor.

Mr. Crisp, just finishing up, then, with the April 1992 JEDEC task group meeting. As of that April 1992 meeting, at that point, it looked as though -- it looked to you as though standardization for the SDRAM might really happen, right?

A. Well, I think I believed all along it was going to happen, it was just a question of when.

Q. And at that point in time, SDRAM had begun to be a concern for Rambus?

A. I think we were always concerned about potential competition.

Q. And the SDRAM presented potential competition for Rambus?

A. We were still trying to gauge that.

Q. And by the way, that was at or shortly after that April 1992 meeting that you proposed that Rambus consider leaking information to the press about JEDEC. Is that right?

A. I had proposed something like that, yes. I think that what I remember reading in the press seemed to be painting a rosier picture of how the standardization was going than what I actually saw.

Q. But at any length, it was at or shortly after the April 1992 meeting that you wrote the email that we looked at this morning that you were proposing or considering leaking information to the press, right?

A. Yes, I put that in the email, that's correct.

Q. Now, at the beginning of May 1992, your boss, vice president Allen Roberts, met with Lester Vincent, right?

A. I'm sorry, I don't know whether he did or didn't.

MR. OLIVER: May I approach?

JUDGE McGUIRE: You may.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a page of handwritten notes of Mr. Lester Vincent. The top reads "Conference with Allen Roberts," the date, and I should represent to you, I think there's been some discussion as to whether the date is May 2nd or May 12th of 1992. It appears on the page to be May 2nd, 1992.

Now, does CX-1946 refresh your recollection that in early May 1992 Mr. Roberts did, in fact, meet

with Mr. Vincent?

A. Well, I don't know what meetings Mr. Roberts held with Mr. Vincent, or with anybody else, necessarily, unless I happened to be in the meeting or had some other kind of knowledge of it. So, I think the meeting happened, I just don't have a recollection to be refreshed as you put it.

Q. Well, some time before early May 1992, you had a discussion with Mr. Roberts concerning claims that you wanted to add to Rambus patents, right?

A. I don't remember the exact discussion, I think that what happened was I had some ideas for some claims that I thought should be in our patent application that Horowitz and Farmwald had invented, if they weren't already, and I wanted to make sure that they were there.

Q. And one of the ideas that you had for claims to be added, if they weren't already in there, was use of the mode register to control latency, right?

A. Yes, that's right.

Q. And you also wanted to check to see if the original application had references to blocks, right?

A. I think I was -- I think I was more interested in making sure that or asking to make sure that we had claims that covered that as opposed to me personally

making sure.

Q. So, you were interested in making certain that Rambus had claims that covered blocks?

A. I think that I was of a mind set that there were things that I believed had been invented by Farmwald and Horowitz. I was unsure whether or not we had claims in that area, and I suggested to Mr. Roberts that if we didn't, we should have some claims in those areas, including blocks.

Q. Now, blocks is a concept that's similar to burst length, right?

A. You said blocks?

Q. Yes.

A. I'm trying to think. When you're talking about computer caches, there's a concept of a block size, and you could also think of that in terms of a line. I think that -- well, I'm not sure about blocks. I'm just simply not sure. I don't see that on this list, and I'm not remembering that.

Q. Well, let me direct your attention halfway down the page, that reads, "Check whether original application has blocks." Do you see that?

A. Sure. Blocks. Yeah, I see that, I don't -- I thought I knew what that was, I guess I don't really know what that is at this point in time.

Q. But you're aware that the Rambus patent application had references to block size. Is that right?

A. You know, that I don't remember. I just simply don't remember one way or the other.

Q. In any event, your goal in making suggestions to Mr. Roberts was that if Rambus's patent application didn't already contain claims broad enough to cover SDRAMs, if they used a mode register or programmable CAS latency, your goal was to add such claims, right?

A. Actually, my goals were to make sure that we had claims that were as broad as could be supported by original Farmwald/Horowitz invention.

Q. And that would include claims that would be broad enough to cover SDRAMs, right?

A. Well, I don't know if it would or wouldn't, it really depends on what could be supported in the original Farmwald and Horowitz patent application. I didn't know. You know, as -- like any inventor, I would like to see the claims to be as broad as could be supportable under the law.

Q. So, in other words, if the claims could be supported, you wanted the claims to be broad enough to cover SDRAMs, right?

A. If they would cover that, that would be fine

with me.

Q. Now, at about the same time that your boss, vice president Roberts, met with patent author Lester Vincent to discuss the claims you wanted added to the patent application, you attended the next meeting of JEDEC, right?

A. I did attend another meeting of JEDEC. I'm not sure about everything that you said before.

Q. Well, you attended a JEDEC meeting on May 6, 1992?

A. I know it was in early May, I don't remember the date.

MR. OLIVER: May I approach?

JUDGE McGUIRE: You may.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-34 that we were just looking at a moment ago. And actually, let me state for the record that these are minutes of the JC-42.3 committee and the date actually reads May 7th, 1992. Do you see that?

A. Yes, sir, I do.

Q. And do you see the front page about two-thirds of the way down, your name is listed?

A. Yes, I was there.

Q. Now, at the May 1992 meeting at which Mr.

Kelley summarized the events from the special task group meeting in April of 1992?

A. Yes, I believe that he had a summary of that task group meeting.

Q. Now, at this May 1992 meeting, it was just very shortly after you had a discussion with vice president Roberts concerning claims you wanted to add, you sought additional presentations at JEDEC concerning programmable CAS latency. Isn't that right?

A. I don't specifically remember, but it's certainly possible.

MR. OLIVER: If we could have just a moment, Your Honor.

JUDGE McGUIRE: Yeah, go ahead.

MR. OLIVER: May I approach, Your Honor?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a copy of the transcript of your trial testimony in the Infineon matter. I would like you to turn, if you could, please, to page 118. I would like to read for you pages 118, line 10, through 119, line 4.

"Question: Now, if you take the specific task force meeting and the May meeting together, let me just list the technologies we've just identified.

"We've got dual edge transfer. You mentioned source synchronous clocking. You mentioned mode register, programmable CAS latency and programmable burst. Is that right? That's what we talked about?"

"Answer: Yes.

"Dual edge transfer, source synchronous clocking, mode register, programmable CAS latency and programmable burst, right?"

"Yes.

"Now, these are the features that were being considered at these meetings, at the special task force on the SDRAM standardization and then at the full JC memory committee meeting, JC-42.3, in the May meeting, right?"

"Answer: That's right."

Does that refresh your recollection that at the April and May meetings you sought renewed discussion of programmable CAS latency?"

A. I wasn't able to fully follow all that you were reading as I got confused where we were on the page. If you'll give me just a moment to read this, then I can perhaps answer your question.

Q. Certainly.

A. Okay, I found where you were reading that and made the transition from panel to panel correctly.

So --

Q. Now, does that refresh your recollection that at the May 1992 meeting you saw a presentation involving programmable CAS latency?

A. Yes, it does.

Q. And at that meeting, you said nothing about your idea to add claims to Rambus's pending patent application that would cover programmable CAS latency. Isn't that right?

A. Yes, that's true. I wasn't a presenter.

Q. So, you just sat there in silence and watched these presentations go forward. Isn't that right?

A. Yes, that's correct.

Q. Mr. Crisp, I would like to show you next CX-673, that's an email that you wrote.

May I approach, Your Honor?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Now, Exhibit 673 is your notes from the May 1992 JEDEC meeting, right?

A. Yes, that's correct.

Q. Now, at the May 1992 meeting, there was also a discussion about use of one bank versus two bank and how that is usually handled for SDRAM standards, right?

A. You know, I'm not sure what all was discussed,

I do remember the topic of one bank versus two banks came up at some point in that meeting. I don't really remember everything that was discussed about it.

Q. By the way, do you know Mr. Willie Meyer?

A. I've met him.

Q. He was the representative of Siemens at the meeting?

A. I can't remember if it was him or if it was Dr. Piez1 or perhaps both of them were there. I just really don't remember.

Q. In any event, Willie Meyer was employed by Siemens?

A. Yes, that's correct.

Q. And you know that he did attend JC-42.3 subcommittee meetings?

A. Yes, that's where I met him, in that context.

Q. The semiconductor division of Siemens was later spun off to become Infineon, right?

A. Yes, that's correct.

Q. Returning to the May 1992 meeting, now, at that meeting, Mr. Meyer of Siemens expressed concern as to whether Rambus might have potential patents relating to two-bank design, right?

A. I don't know who it was. I do remember something came up from somebody from Siemens, but I

don't remember which individual it was.

Q. Well, after someone from Siemens voiced their concern as to whether Rambus had potential patents, the subcommittee chairman asked a question directly to you, right?

A. Yes, that's correct.

Q. And that was Mr. Gordon Kelley?

A. Yes, that's correct.

Q. And he asked if you would comment, right?

A. That's right.

Q. But you declined, right?

A. That's also correct.

Q. So, you didn't disclose any patents or patent applications in response to his question?

A. That's right. He asked me if I cared to comment and I declined to comment.

Q. In fact, you didn't disclose any information with respect to Rambus's IP in response to his question, did you?

A. What do you mean by IP?

Q. Intellectual property.

A. That's pretty broad.

Q. Well, you just simply declined to comment. Is that right?

A. My recollection is that I made no comments.

Q. Now, at that time, you also knew Mr. Howard Sussman?

A. I had met him, yes.

Q. And he was a representative of NEC at that time. Is that right?

A. Yes, that's correct.

Q. And at that meeting, Mr. Sussman stated that he had seen Rambus's foreign patent application, didn't he?

A. Yes, that's right.

Q. Mr. Sussman was referring to the foreign counterpart of the original 1990 Farmwald and Horowitz application?

A. Yes, that was my understanding of what he was speaking.

Q. That's the PCT application of CX-1454 that we looked at this morning?

A. I don't remember the designator, but I know we looked at it this morning.

Q. And at this meeting, Mr. Sussman said that he didn't think that that foreign Rambus patent application would be a concern for the JEDEC SDRAM standardization effort, right?

A. I don't remember exactly what he said. I think it was something that sounded a lot like that. It may

have been slightly different.

Q. But you were there and you heard him say something along those lines?

A. That's what I remember. I think that's what I remember.

Q. And you didn't say anything at that time to contradict Mr. Sussman, did you?

A. I think that's correct, yes.

Q. Now, shortly after this meeting, on May 29th, you spoke again with Mr. Lester Vincent, right?

A. I'm not sure.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I have handed you a document marked as CX-1947. This again is a page of handwritten notes from Mr. Lester Vincent labeled Telecon for teleconference at the top, bearing a date of May 29, 1992, and it begins, "w/ Richard Crisp." Do you see that?

A. Yes, I do.

Q. Let me direct your attention to the third bullet point in particular, the last bullet point, "Richard has claims for cases we have filed plus claims for divisionals." Do you see that?

A. Yes, I do.

Q. Does that refresh your recollection that on May 29th, 1992, you spoke with Mr. Lester Vincent?

A. Well, I'm pretty sure that that teleconference happened, but I don't remember it.

Q. And you're also pretty sure that in that teleconference you discussed claims that you had for the divisionals?

A. Well, that's what Mr. Vincent has on his notes, so I would believe that that's what -- that must have been one of the things that we talked about, but I don't remember the conversation.

Q. Now, the following month, in June 1992, chief executive officer and president Geoff Tate circulated a draft Rambus business plan, right?

A. I'm sorry, I don't remember that.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked CX-043a, the front page is on Rambus letterhead, June 18, 1992, the first line reads, "Attached is the Rambus, Inc. 1992-1997 business plan dated June 1992." It's signed Geoff Tate, then if you look on the following pages, the caption on the bottom reads,

"Draft of June 18, 1992." Do you see that?

A. Yes, sir, I do.

Q. Does this refresh your recollection that in June 1992 CEO and president Geoff Tate circulated a draft Rambus business plan?

MR. PERRY: Your Honor, there's no foundation. He's not on the list of the people that it's to and this was distributed, I think he ought to lay a foundation.

MR. OLIVER: Your Honor, that's the basis of my question.

JUDGE McGUIRE: Well, that is sustained, but I don't think you've gotten there yet, so let's lay a proper foundation.

MR. OLIVER: Yes, Your Honor, I'm trying to ask if this refreshes his recollection.

JUDGE McGUIRE: Well, you know, you're not there, so let's try to get there.

MR. OLIVER: Okay. Thank you, Your Honor.

Mr. Crisp, does CX-543a refresh your recollection that in June 1992 you saw a draft Rambus business plan?

THE WITNESS: No.

BY MR. OLIVER:

Q. Mr. Crisp, let me ask you to turn, please, to

page 15 of CX-543a. And let me read a paragraph to you and then ask a couple of questions of you. I would like to direct your attention to the third paragraph on page 15.

I'm sorry, Your Honor, if we could have just a moment, please.

(Brief pause.)

BY MR. OLIVER:

Q. I apologize, Mr. Crisp, I was referring to page 17 on the lower, right-hand corner, page 15 from the document itself. It's a page that begins at the top, "Secondly, to gain awareness." Do you see that?

A. Yes, sir, I do.

Q. I would like to direct your attention to the third paragraph on that page, please. It reads, "Finally, we believe that Sync DRAMs infringe on some claims in our filed patents; and that there are additional claims we can file for our patents that cover features of Sync DRAMs. Then we will be in position to request patent licensing (fees and royalties) from any manufacturer of Sync DRAMs. Our action plan is to determine the exact claims and file the additional claims by the end of Q3/92. Then to advise Sync DRAM manufacturers in Q4/1992."

Do you see that?

A. Yes, I do.

Q. Do you recall having any discussions with any individuals within Rambus during or before June 1992 concerning whether Sync DRAMs infringe Rambus patents?

A. I can't remember.

Q. Now, was it consistent with your understanding at that time that Rambus could file additional claims for patents that would cover features of Sync DRAMs?

A. Well, I wasn't sure.

Q. Well, in fact, the purpose of you suggesting claims to Allen Roberts to pass on to Lester Vincent was to do that, wasn't it?

A. I think I explained earlier that my belief was that we had made a lot of inventions and Farmwald and Horowitz had made a lot of inventions that they had described in their 1990 patent filing, and I think I also mentioned that I wasn't sure what the claims had said, but it appeared to me that if we didn't have claims on certain areas that we should make sure that we get them if they're supportable by the patent specifications.

Q. Let me direct your attention to the next to last sentence of the paragraph I just read, "Our action plan is to determine the exact claims and file the additional claims by the end of the third quarter

1992." Do you see that?

A. Yes, I do.

Q. That was, in fact, the action plan that you followed in subsequent months, wasn't it?

MR. PERRY: Your Honor, there is no foundation to examine him off of this document. There is no showing that he has ever seen it.

MR. OLIVER: Your Honor, my question is independent of the document, just using the language that in fact in the following months whether he did that.

JUDGE McGUIRE: Overruled, go ahead.

THE WITNESS: Would you ask the question again, please.

MR. OLIVER: Could you read the question back, please.

(The record was read as follows:)

"QUESTION: That was, in fact, the action plan that you followed in subsequent months, wasn't it?"

THE WITNESS: I just don't remember any action plan or anything called that during that time frame or any other time frame.

BY MR. OLIVER:

Q. Well, you continue to attend JEDEC meetings, right?

A. Yes, that's true.

Q. And you continue to observe the features that were being proposed within JEDEC for Sync DRAMs?

A. Yes, that's true.

Q. And you continue to be involved in defining additional claims to be added to Rambus's pending patent applications, didn't you?

A. That may be true, I can't remember.

Q. In fact, you met personally with Mr. Vincent later this year to work on the claims that you wanted to add to the pending applications, didn't you?

A. I think I said I didn't remember whether I added -- helped add anymore claims or helped to suggest more claims or not. There was a point where I no longer was involved in that, I don't remember where that point was.

Q. Now, we talked a few moments ago about the May 1992 JEDEC meeting. Do you recall that?

A. Yes, I do.

Q. Now, that was the meeting at which JC-42.3 subcommittee decided to issue four ballots relating to SDRAM standardization, right?

A. I'm sorry, could you say the date again?

Q. Yes, May 1992, the JC-42.3 subcommittee decided to issue four ballots related to SDRAM standardization,

right?

A. Again, I don't -- I know that at some point there were four ballots that were released, I don't know which meeting it was, where that occurred.

Q. Do you recall that those ballots were, in fact, issued on June 11th, 1992?

A. No, I'm sorry, I don't recall that date.

MR. OLIVER: If we could have just a moment, Your Honor.

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you four documents that have been marked as CX-252a, CX-253, CX-254 and CX-255. Do you recognize these as four ballots issued by JEDEC relating to the proposed SDRAM standard?

A. I think so, yes.

Q. Do you see the date on each of these ballots as June 11, 1992?

A. Yes.

Q. Now, if I could ask you to turn, please, to CX-252a. Do you have that document?

A. Yes, I do.

Q. And if I could ask you to turn, please, to the third page of 252a. Do you see that?

A. Yes, sir.

Q. It has the caption in the upper left-hand column or upper left-hand side, Mode Register.

A. Yes, I see that.

Q. And then to the right-hand side of the page, about the middle, there's a box that says, "Wrap Length." Do you see that?

A. Yes, I see that.

Q. And you recognize that as indicating a certain programmable feature?

A. Yes, sir, that's right.

Q. And below that, there's a box that's labeled Latency Mode. Do you see that?

A. Yes, I see that.

Q. And again, you recognize that box as representing programmable feature?

A. Yes, that's right.

Q. Now, Mr. Crisp, shortly after these ballots were issued, you had another conversation with Lester Vincent, didn't you?

A. I don't recall.

MR. OLIVER: May I approach?

JUDGE McGUIRE: You may.

BY MR. OLIVER:

Q. Mr. Crisp, I have handed you a document marked as CX-1930, again, this is a set of the green sheets or

billing records of Mr. Lester Vincent, and if I could ask you to turn, please, to page 34. And let me direct your attention to the first entry on this page, please. It's very difficult to read on paper copy, I think the computer screen is easier to read. If you look at the computer screen, you will see the first entry there reads, "June 23, 1992, Lester Vincent, teleconference with Richard Crisp concerning status divisional applications."

Do you see that?

A. I do.

Q. Now, you wanted Lester Vincent to hurry up and file the additional claims that you had proposed, right?

A. I think I was curious where they were standing, because I believe somebody may have asked me what was going on with that.

Q. Well, you recall that one of the claims you proposed to Allen Roberts related to using the mode register to control access latency, right?

A. Well, I had stated it a little bit differently than that, but it was posed more or less as a question of do we have a claim that covers that, and if not, why not.

Q. Let me ask you to find CX-1946 in front of

you, please.

A. Do I have that?

Q. I believe you do. It's a single page document that consists of handwriting.

A. Yes, I see it.

Q. Lester Vincent's notes here on CX-1946 state, "Richard Crisp wants to add claims to original application, add claims to mode register to control latency." Does that refresh your recollection that, in fact, you wanted to add claims to control -- to mode register to control latency?

A. Well, I wanted to make sure we had those claims. I don't know if it was necessary to add new ones or not, I just wanted to make sure we had claims.

Q. So, in any event, after you received the ballots issued by JEDEC on June 11, 1992, including the ballot relating to mode register, you called Lester Vincent, right?

A. It may have been me that called him or it may have been the other way around. I'm not sure which way it was, but we talked.

Q. And again, you wanted to urge him to file the claims as quickly as possible, right?

A. Well, I think I was curious what the status was.

Q. Didn't Mr. Vincent tell you that there was no particular rush in filing the claims because Rambus wouldn't lose any rights by waiting?

A. It's very possible he may have told me that. I don't really remember our conversation very clearly.

Q. Let me ask you to turn back to CX-252a, please, this is the ballot we were looking at a moment ago. Do you have CX-252a in front of you?

A. Yes, I do.

Q. Now, this is a standard form ballot that was used during the time that you were participating in JEDEC, right?

A. Well, at least it was what was used at this point in time. It's possible they may have changed.

Q. And on this particular ballot, you expected to signal your vote on page 2?

A. Yes, that's correct.

Q. And there are a number of options set forth that can be checked, right?

A. Yes, that's correct.

Q. And the first line is if you approve the content?

A. Yes, that's right.

Q. The second line is if you approve the content but have comments?

A. Yes, that's correct.

Q. The third line is you do not approve.

A. Yes, that's correct.

Q. The fourth line is if you abstain?

A. Yes.

Q. And the fifth line reads, "If anyone receiving this ballot is aware of patents involving this ballot, please alert the committee accordingly during your voting response." Do you see that?

A. Yes, I do.

Q. Now, you voted on this ballot, didn't you?

A. Yes, that's correct.

Q. You checked the box I do not approve of the content, right?

A. Yes, that's correct.

Q. But when you returned this ballot, you did not check the box saying that you were aware of patents involving the ballot, right?

A. Yes, that's correct.

Q. Now, these ballots were tallied in the July 1992 meeting, right?

A. I don't remember what the date of the meeting was, I know they were tallied at the next meeting, whatever date that was held.

MR. OLIVER: May I approach, Your Honor?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you JX-13, which are the meeting minutes from the July 21, 1993 meeting -- excuse me, July 21, 1992 meeting. Do you see that?

A. Yes, sir, I do see that.

Q. And you were present at this meeting, right?

A. Yes, I was.

Q. If you look about three quarters of the way down the first page, you're listed, I believe, as Mr. Rod Crisp.

A. Yes, that's correct.

Q. But that was you, right?

A. Yes, I'm virtually certain that was me.

Q. Now, vice president Mooring also attended this meeting, right?

A. Yes, he did.

Q. Now, at the beginning of this meeting, Mr. Townsend again presented the patent policy, right?

A. Well, I don't actually remember that, but I imagine he would have.

Q. Let me direct your attention to page 4 of JX-13. If I can direct your attention to item number 4 about halfway down the page, "Patent Issues, Chairman Townsend showed the patent policy and the tracking list

(see attachment A)." Do you see that?

A. Yes, I do.

Q. Does that refresh your recollection that Chairman Townsend presented the patent policy at this meeting?

A. Yes, it does.

Q. Now, if I could direct your attention to page 9. And specifically item number 16, towards the top of the page, the caption reads, "DRAM Ballot Counts." Do you see that?

A. Yes, I do.

Q. Now, does that refresh your recollection that the various ballots were, in fact, tallied at this July 1992 JEDEC meeting?

A. Yes, it does.

Q. Now, patent issues were, in fact, discussed during the tabulation of these ballots, right?

A. I'm sorry, I don't remember.

Q. Let me direct your attention about a third of the way down the page to a paragraph beginning IBM. Do you see that?

A. Yes, I do.

Q. That paragraph reads, "We're concerned about the completeness and cleanliness of these SDRAM ballots. We do not want parts from various vendors

that are not plug compatible. All functions, control, options, package and pinout details must be specified to avoid incompatible parts. Patent issues must be cleaned up before we proceed."

Do you see that?

A. Yes, I do.

Q. And then immediately after that, there was a discussion of Motorola patent, right?

A. I don't really remember.

Q. If I could direct your attention to the next paragraph in the minutes, there's a reference there to Motorola, a patent 5,077,693. Do you see that?

A. Yes, I do see that.

Q. Does that refresh your recollection that there was, in fact, a discussion of the Motorola patent following the IBM comment?

A. It must have happened, I really don't remember it, though.

Q. And after that, you explained the Rambus vote, right?

A. Yes, they have me -- they have Rambus down explaining the no vote.

Q. Because this is one of the ballots that you voted on, right?

A. That's correct.

Q. And you provided some technical comments. Is that right?

A. Yes, that's correct.

Q. And you explained the technical reasons why you voted no?

A. Yes, that's correct.

Q. But again, you did not say anything at all with respect to potential Rambus patents. Is that right?

A. I don't think I was asked to.

Q. My question is you did not say anything with respect to Rambus -- potential Rambus patents. Isn't that right?

A. Yes, that's correct.

Q. And following consideration of that ballot, the committee moved on to the remaining three ballots. Is that right?

A. I don't remember which order they were covered, but I know all four of the ballots were reviewed.

Q. Let me ask you to turn, please, to page 10. Do you see item 16.3 about two-thirds of the way down page 10?

A. Yes.

Q. This refers to the mode register ballot. Is that right?

A. Yes, that's correct.

Q. And that is CX-252a that we looked at just a moment ago, right?

A. I thought that's the one we had just done a few moments ago. Is this a different one than the last one? Yes, this is CX-252a.

Q. And the Rambus comment with respect to the mode register ballot was the same as the comment that we looked at on page 9, right?

A. I'm sorry, could you ask your question again?

Q. Sure. Let me instead --

A. I'm confused about what the last ballot we looked at was. I thought it was this one. I just want to make sure I'm giving you the right answers to the right ballots.

Q. Let me back up just a moment to make certain the record is clear. A moment ago we looked four separate ballots. Do you recall that?

A. Yes, that's correct.

Q. Those were CX-252a, 253, 254 and 255?

A. Yes, that's right.

Q. And then if you look at JX-13 at pages 9, 10 and 11, you'll see references on page 9 to 16.1, page 10 to 16.2 and 16.3, and on page 11 to 16.4. Do you see that?

A. Yes, that's right, I see those.

Q. And if you look at the item numbers at the end of each caption, you'll see 16.1 -- 16.1 actually does not have an item number. 16.2 is item 376.2. Do you see that?

A. Yes.

Q. And do you see that that corresponds to one of the ballots?

A. Yes, I was just trying to figure out which ballot. Yes, okay.

Q. And do you see that item 16.3 is item number 376.3?

A. Yes. I do see that.

Q. And item 376.3 corresponds to the mode register ballot. Is that right?

A. Yes. That's correct.

Q. And item 16.4 on page 11 corresponds to 376.4? Do you see that?

A. Yes, I see that.

Q. Now, does that help you match the discussion in the minutes with the ballots?

A. Yes, it does, thank you.

Q. Now, again, item 16.3 on page 10 was the discussion corresponding to mode register ballot. Is that right?

A. I'm sorry, 16 which?

Q. 16.3 on page 10.

A. Yes, I see that.

Q. And that corresponds to the mode register ballot, CX-252a, right?

A. Yes, that's correct.

Q. And now if you look at the second line in paragraph 2, "Comments from Compaq, IBM, Rambus were the same as ballot 42.3-92-83." Do you see that?

A. Yes, I see that.

Q. And that refers back to item 16.1, page 9, right?

A. 16.1 on page 9, yes.

Q. So, in other words, the comment that Rambus made underneath 16.1 on page 9 also applied to item 16.3, page 10, right?

A. That's correct.

Q. Again, at the time that the mode register ballot, item 376.3, was being considered, you never said anything to the respect to potential Rambus patents relating to that ballot, did you?

A. That's correct.

Q. Now, the following month, in August of 1992, you spoke with Mr. Vincent again concerning the amendment of claims, right?

A. I don't remember.

Q. If I could ask you to look at CX-1930 in front of you, that's the collection of Mr. Vincent's green sheets or billing records.

A. I have it.

Q. If I could ask you to turn, please, to page 42. Again, the paper copy is difficult to read, it might be easier to read on the computer screen, but if you look at the first entry there, it reads, "August 24, '92, Lester Vincent, teleconference with Richard Crisp concerning amendment of claims." Do you see that?

A. Yes, I do.

Q. Does that refresh your recollection that in late August you did, in fact, have another discussion with Mr. Vincent concerning amendment to the Rambus patent claims?

A. Well, I see that the teleconference occurred, but I'm sorry, I don't remember it.

Q. You have no reason to believe that that conference did not occur, do you?

A. No, no, I just don't remember it.

Q. Now, Mr. Crisp, the following month, in September 1992, Mr. Mooring reported to the Rambus board of directors on potential competition in JEDEC synchronous DRAM, right?

A. That's possible. I don't know that I know

about that or the date.

Q. Let me skip ahead for a moment, in October 1992, you yourself reported to the Rambus board of directors, right?

A. I remember once being asked to join in a board of directors meeting, I don't remember the date.

Q. And that was -- strike that.

Mr. Mooring was present at that time as well?

A. I don't think he was president in 1992.

Q. He was not present at the time that you --

A. I'm sorry, I thought you said president, you said present.

Q. Present at the board of directors meeting at the time that you made your presentation?

A. Yes, at the time that I was invited to the board of directors meeting, Mr. Mooring was also in the same meeting.

Q. Returning to the September meeting, and see if this refreshes your recollection.

May I approach, Your Honor?

JUDGE MCGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document that has been marked meetings of -- excuse me, Minutes of a Regular Meeting of the Board of Directors of Rambus,

Inc., september 17, 1992, it bears the Bates number or Exhibit Number CX-605. If I could direct your attention to the second page, please.

Now, underneath the caption Sales and Marketing, the last sentence of that section, it's about halfway down the page, a sentence that reads, "Mr. Mooring also reported on potential competition from the JEDEC/Sync DRAM and CDRAM."

Do you see that?

A. Yes, I do.

Q. Does that refresh your recollection as to whether Mr. Mooring, in fact, gave a presentation to the Rambus board of directors in September 1992?

A. I'm not disputing that he gave a presentation to the board of directors, I just don't know if I ever knew about it or was there.

Q. So, as you sit here today, you don't have any recollection of ever having discussed with Mr. Mooring a presentation he gave to the board of directors in September 1992?

A. I can't remember.

Q. Now, in September 1992, you also attended the next JEDEC meeting, right?

A. I don't remember what the date was of the next JEDEC meeting.

MR. OLIVER: If I could have just a moment,
Your Honor.

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. Actually, Mr. Crisp, before we get to the
September '92 JEDEC meeting, also in September of 1992,
Rambus prepared a further version of the business plan,
right?

A. I don't have any knowledge of that that I can
recall.

MR. OLIVER: May I approach, Your Honor?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as
CX-545, it bears the title Rambus, Inc. Business Plan
1992-1997, September 1992. Do you recognize this as a
revised version of the draft business plan from June
1992 that we looked at earlier?

A. It looks vaguely familiar.

Q. If I could ask you to turn, please, to page 20.

A. Was that CX-545-020?

Q. Actually, if you can hold on just a moment,
please.

A. May I have some more water, please?

MR. PERRY: May I, Your Honor?

JUDGE McGUIRE: Go ahead.

THE WITNESS: Thank you very much.

JUDGE McGUIRE: Do you have anything else over there, Mr. Perry, of any interest?

BY MR. OLIVER:

Q. Thank you, Your Honor.

Mr. Crisp, actually if I could direct your attention to page 21.

A. Now, which numbers am I going by for 21, the lower left?

Q. The lower right-hand corner, 021.

A. Thank you, I've got that.

Q. You see at the top of this page a statement, "Sync DRAMs infringe claims in Rambus's filed patents and other claims that Rambus will file in updates later in 1992." Do you see that?

A. Yes, I do see that.

Q. Does that statement refresh your recollection having seen the Rambus business plan dated September 1992 in or about September 1992?

A. I'm not sure that I ever saw this business plan in that time frame. I think I saw it much, much later than that, maybe after I resigned from the company.

Q. So, in other words, you think you may have seen this in preparation for litigation?

A. That's correct. I'm not sure that I saw it at the time that it was created initially. I just don't have any recollection of it.

Q. Would it be fair to say, then, that as you sit here today, you don't recall one way or the other whether you did see it in the September 1992 time frame?

A. Yeah, I think that's what I'm saying. I just simply don't remember seeing it.

Q. Let's turn now to the September 1992 JEDEC meeting.

A. Do I have minutes for that?

Q. Not yet.

May I approach?

JUDGE MCGUIRE: Go ahead.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-680, it's an email from Billy Garrett to CEO Geoff Tate, vice president David Mooring, a member of the board of directors Mike Farmwald, to you, to Mr. Garrett, to Rick Barth, Fred Ware, to John Dillon and vice president Allen Roberts dated September 21, 1992. Do you see that?

A. Yes, sir, I do.

Q. Now, do you see the subject line, JEDEC

meeting, 9/15-9/17?

A. Yes.

Q. Does this refresh your recollection that the next regularly scheduled JEDEC meeting was in September of 1992?

A. Yes, it does.

Q. And these are Billy Garrett's notes from that meeting. Is that right?

A. That's correct.

Q. Both you and Billy Garrett attended that meeting?

A. That's right, we both attended the meeting.

Q. But Billy Garrett took responsibility for writing up and distributing the notes from that meeting. Is that right?

A. That's correct.

Q. Now, once again at this meeting, JEDEC members were discussing using a mode register with programmable CAS latency. Is that right?

A. I'm sorry, I don't remember.

Q. Let me now direct your attention to the last paragraph on the first page. If I could direct your attention specifically to the fourth line, the sentence that reads, "The only programmable latency needed for the device is CAS read latency (1, 2, 3 or optionally 4

clock cycles - others are reserved)."

Do you see that?

A. Yes, sir, I see that.

Q. Does that refresh your recollection that members were discussing programmable CAS latency at this meeting?

A. That's what I read.

Q. And members were also discussing programmable burst length at this meeting. Is that right?

A. I saw it in the minutes and in the trip reports, so I only conclude that they must have, I just don't remember.

Q. Now, at this meeting you also saw a technology known as auto-precharge, right?

A. It's possible, I don't have any specific recollection of it.

Q. Let me ask you to turn to page 2, please. Let me direct your attention about halfway down the page, to the statement that reads, "Precharge and auto-precharge were not resolved. Lots of disagreement on the effects on banks and how auto-precharge will be done."

Do you see that?

A. Yes.

Q. Does that refresh your recollection that the

auto-precharge feature was discussed at this meeting?

A. Yeah, it must have been discussed there.

MR. OLIVER: Your Honor, if I could approach the table.

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. And again, Mr. Garrett reported this back to a number of members at Rambus, right?

A. Yes, that's correct.

Q. And Mr. Garrett's report, again, included CEO Mr. Tate, vice president Mooring, vice president Roberts and member of the board of directors Mr. Farmwald?

A. Yes, that's correct.

Q. Now, once again, just a few days after this JEDEC meeting, you met again with Rambus patent lawyer Lester Vincent, didn't you?

A. It's possible, I don't remember.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-1949, it consists of handwritten notes of Mr. Lester Vincent dated September 25, 1992, captioned at the top Conf for conference w/ Richard Crisp. Does this

refresh your recollection on September 25th, 1992 you met again with Mr. Lester Vincent?

A. I don't remember the meeting, but I'm not going to dispute that it happened.

Q. Well, do you recall discussing with Mr. Vincent at about this time some additional claims that you wanted to seek filed with the Patent & Trademark Office?

A. You know, I don't remember that. I don't even remember the meeting, but again, I'm not going to argue that it occurred, I just don't have any memory of it.

Q. Well, let's take a look at some of these items here and see if it helps refresh your recollection. Do you see the top statement reads, "What to include in divisional applications," and then underneath that is a number of numbered items. Do you see that?

A. Yes, sir, I do.

Q. The first item with a star next to it, "DRAM - multiple open row addresses." Do you see that?

A. Yes, sir, I do.

Q. Now, you understood multiple open row addresses at this time as a similar concept to multiple open banks or multiple banks?

A. I think they were pretty similar, yes.

Q. So, the concept of multiple open rows here is

similar to the two banks item listed on the table there?

A. Well, I think two banks is a subset of multiple open row addresses.

Q. Okay, so that the statement here in number one, multiple open row addresses would capture at a greater set than the two banks listed on the table?

A. That's what I would think, yes.

Q. So, in other words, the concept of multiple open row addresses in Mr. Vincent's notes here would capture the feature of two banks that had been discussed at prior JEDEC meetings, right?

A. Well, it might and it might not, it depends on, you know, what limitations might be attached to this sort of a claim. For just simply talking about two banks, with nothing else around it, that it very well may, but I'm not sure what the limitations may be. It may be applied to the claims that would be attached to this DRAM with multiple open row addresses.

Q. In any event, the reference here to multiple open row addresses as it appears in Mr. Vincent's notes, without any other limitations appearing in these notes, that could very well capture the feature of two banks that was discussed previously in JEDEC meetings, right?

A. It's certainly possible that it could, I just have no way of knowing.

Q. Now, the next item, item number 2, "DRAM - programmable latency via control reg, or control register." Do you see that?

A. Yes, I do.

Q. Does that refresh your recollection that you discussed with Mr. Vincent the possibility of adding claims to cover use of a programmable latency via the control register?

A. I think we probably talked about that.

Q. And again, programmable latency would be a concept that would also include programmable CAS latency, right?

A. It may, but again, it sort of depends on what limitations may have to be attached to the claims.

Q. But again, as described here in Mr. Vincent's notes, without any limitations attached in his notes, that could very well cover programmable CAS latency, right?

MR. PERRY: Calls for speculation about what he intended when he wrote the notes, Your Honor.

MR. OLIVER: Your Honor, I'm asking about his discussions with Mr. Vincent in September of 1992.

MR. PERRY: That's not what the question says,

Your Honor, it says what do the notes mean.

JUDGE McGUIRE: Yeah, restate the question, Mr. Oliver.

BY MR. OLIVER:

Q. Thank you, Your Honor.

In terms of your understanding of your discussions with Mr. Vincent at that time, your discussions relating to programmable latency could include programmable CAS latency. Isn't that correct?

A. It's possible.

MR. OLIVER: Your Honor, may I approach the table?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. So, in other words, the concept of programmable latency that you were discussing with Mr. Vincent at this time in relation to what to include in divisional applications, that concept of programmable latency could include programmable CAS latency as that had been discussed at earlier JEDEC meetings. Isn't that right?

A. It's possible, as I think I answered earlier.

Q. And then the third item that you discussed with Mr. Vincent was DRAM with packet oriented communications. Is that right?

A. Yeah, that's what he has on his list.

Q. And you told Mr. Vincent that the items that you were discussing with him were to cause problems with Sync DRAM and Ramlink, right?

A. It's possible that we discussed that. I don't, you know, again, as I said, I don't remember the conversation, but I see that in his notes, so we very well must have discussed it.

Q. By the way, let's pause a moment to talk about Ramlink. Ramlink was also a proposed specification for a synchronous DRAM. Isn't that right?

A. I -- I would have a hard time categorizing it exactly that way.

Q. It was something that was being discussed outside of JEDEC, though, right?

A. Yes, that's correct.

Q. It was being discussed at the IEEE?

A. It was being discussed in a working group that was part of the Bay Area section of the IEEE.

Q. And that working group was attempting to establish a standard to be known as Ramlink. Is that right?

A. Yes, that's correct.

Q. Now, you attended some of those meetings as well, didn't you?

A. Yes, that's also correct.

Q. Now, you also told Mr. Vincent that --

A. Geez, I thought I had this thing turned off, I'm very sorry. I'm very sorry.

Q. You also told Mr. Vincent at this September 1992 meeting that you would get Mr. Vincent copies of the Ramlink spec and the Sync DRAM spec, right?

A. You know, I don't remember that, it's certainly possible.

Q. Let me ask you to turn to page 4, please. If I could direct your attention towards the bottom of the page, it reads, "Richard," followed by an arrow.

A. Yes.

Q. "Richard will get copy of the Ramlink spec and the Sync DRAM spec." Is that right?

A. Yes.

Q. Does that refresh your recollection that you told Mr. Vincent at this meeting that you would get him copies of the Ramlink spec and the Sync DRAM spec?

A. Well, I think I told him that I would do that, again, I don't remember the meeting. I think I told him that I would do that.

Q. Now, at this meeting with Mr. Vincent, you also discussed source synchronous clocking?

A. If it's part of this exhibit, we probably did.

Q. Let me ask you to turn to the last page, page

7. Underneath the heading that's difficult to read, it's a reference to P004. Do you see that?

A. Yes, I do.

Q. And you recognize that P004 to be Mr. Vincent's reference to one of the pending Rambus patent applications?

A. I know that now.

Q. And underneath that it reads, "Data and clock driving in same direction, source synchronous clocking." Do you see that?

A. Yes.

MR. OLIVER: Your Honor, may I approach the table?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. And once again, source synchronous clocking is technology that you had seen previously discussed at the JEDEC meetings. Isn't that right?

A. Yes, that's correct. I think it was in that -- well, I don't remember which meeting, but I think I remember somebody talking about it. Hitachi or something like that.

Q. Now, this September 1992 meeting with Mr. Vincent, you also discussed the technology known as phase lock loop, right?

A. I think we did.

Q. If I can direct your attention back to the first page. And again, underneath the caption at the top of the page, what to include in divisional applications, down at number 4, it reads, "Using phase lock loops on DRAM to control delays inside and outside DRAM." Do you see that?

A. Yes, I do.

Q. Does that refresh your recollection that you were discussing with Mr. Vincent including claims in divisional applications relating to phase lock loops at the September 1992 meeting?

A. Yes, that does.

Q. And you told Mr. Vincent that there are many different ways of designing phase lock loops but you wanted to cover the entire concept of producing phase lock loops for deskewing inputs. Is that right?

A. Well, I don't remember exactly talking about it in those terms, but it's very possible that we did.

Q. Well, let me ask you to turn to the fifth page of CX-1949, please. If I can direct your attention to the bottom five lines, "Many different ways of designing the PLL, want to cover concept of using concepts of deskewing input." Do you see that?

A. Yes, I do.

Q. Now, does that refresh your recollection that you told Mr. Vincent that you wanted to cover the entire concept of using PLLs and deskewing inputs?

A. Yes, it does.

Q. And you discussed with Mr. Vincent that you wanted to claim general usage of PLL circuits on a DRAM, not a particular PLL circuit, right?

A. Yeah, if the specification in the Farmwald/Horowitz 1990 invention described that, I thought we should cover it, if it wasn't already.

Q. Now, the following month, in October 1992 is when you gave a presentation to the Rambus board of directors, right?

A. I don't remember what the date was, I just remember I was asked to come in there one time.

MR. OLIVER: May we have just a moment, Your Honor.

JUDGE McGUIRE: Yes.

MR. OLIVER: May I approach, Your Honor?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as CX-606, it bears a caption Minutes of a Regular Meeting of the Board of Directors of Rambus, Inc., October 22nd, 1992. Let me direct your attention in

particular, please, to page 2, underneath Sales and Marketing, the second sentence, "At this point, Richard Crisp of the company joined the meeting."

Do you see that?

A. Yes, I do.

Q. Does this refresh your recollection that you gave a presentation to the Rambus board of directors in October of 1992?

A. Yes, it does.

Q. Now, if we could now pause for a moment, I would like to put this in perspective. In July 1992, you and Rambus vice president David Mooring attended a JEDEC meeting, right?

A. I don't remember the date, but I think it was July.

Q. And at that meeting, you and Mr. Mooring watched JEDEC tabulate the ballots on programmable mode register?

A. Yes, that's correct.

Q. And then in September of 1992, we saw a set of Rambus board of directors minutes indicating that Mr. Mooring made a presentation to the board concerning potential competition from JEDEC Sync DRAM and CDRAM. Do you recall that?

A. Yes, I do remember that.

Q. And you also recall in September 1992 you and Billy Garrett also attended the next JEDEC meeting?

A. Yes, that's correct.

Q. And you recall that at that September 1992 meeting we looked at a number of features that were discussed in that meeting?

A. I'm sorry, I don't know what you mean by that.

Q. You recall when we looked at the email that Billy Garrett sent back from the September 1992 JEDEC meeting, we saw a number of technological features that were discussed at the JEDEC meeting?

A. Yes. I believe that was true for all of our trip reports.

Q. For example, you recall that we discussed the auto precharge feature in the September 1992 meeting?

A. Yeah, it was in those minutes, that's right.

Q. And we also saw that there was further discussion of programmable CAS latency and programmable burst length at the September 1992 meeting. Do you recall that?

A. Yes, that's right.

Q. And then a week after that meeting, you met with Lester Vincent to discuss additional claims that you wanted to add to Rambus's pending patent applications. Do you recall that?

A. Yes, I did have a meeting with him in that time frame.

Q. And then, the next regularly scheduled Rambus board of directors meeting in October 1992, you gave a presentation, right?

A. Yes, that's correct.

Q. And at the board of directors meeting, you gave a report on the SDRAM status of JEDEC, correct?

A. Yes, that's what the minutes indicate.

Q. You also gave a report on the Rambus patent strategy?

A. Yes, that's correct.

Q. Then immediately following that, Mr. Mooring spoke on Rambus versus Sync, meaning Sync DRAM positioning, and potential competition from the Rambus strategy, right?

A. Well, I think you skipped over something that I talked about next, system level difficulties with SDRAM, I'm just going by the minutes, then Mr. Mooring spoke after that.

Q. So, in other words, he spoke on three different topics, is that right?

A. Well, that's what it says here, and you mentioned two of the three, I think just to make the record correct, you may want to cover them all.

Q. So, the three topics he spoke about were the SDRAM status at JEDEC, the Rambus patent strategy, and system level difficulty with SDRAM. Is that right?

A. That's what the minutes indicate. I don't remember much about it, but that's what the minutes indicate.

Q. And you don't recall anything other than what the -- or anything different from what the minutes indicate?

A. That's right. This is all I had to go by.

Q. And were you present for Mr. Mooring's presentation?

A. I don't remember.

Q. In any event, you don't recall anything with respect to Mr. Mooring's presentation that is different from what is reflected in the board of directors minutes?

A. Well, I'm just not sure that I was in the meeting for that part. I guess I was, you know, I just don't remember it, I'm sorry.

Q. Now, the next month, after this board of directors meeting, November 1992, you met again with Mr. Vincent to work on patent claims, right?

A. It's certainly possible, I don't remember meeting with him.

Q. Do you still have CX-1930 in front of you, and that's, again, the set of Mr. Vincent's green sheets or billing records.

A. Yes, I have them.

Q. If I could ask you to turn, please, to page 59. And do you see some entries for 11/5/92 on this page?

A. Yes, I do.

Q. Again, it might be clearer on the computer screen, but under the 11/5/92 entries, do you see an entry for "Meeting with Richard Crisp and Mike Farmwald regarding claims for multiple row address and synchronization, including travel to and from meeting?"

A. Yes, I see that.

Q. And again, multiple row address that you stated is perhaps broader than the two bank feature that was discussed at JEDEC?

A. It's possible that it could be broader, yes.

Q. And before this meeting took place, you also informed CEO Geoff Tate and vice president Allen Roberts, right?

A. Informed them of what?

Q. That you and Mr. Farmwald were going to meet with Lester Vincent?

A. I really have no recollection of that.

MR. OLIVER: May I approach?

JUDGE McGUIRE: You may.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked CX-682, it's an email from you to Mr. Farmwald, copying Allen Roberts, Geoff Tate and yourself, dated November 4, 1992. Do you see that?

A. Yes.

Q. The subject is Lester Vincent meeting.

A. Yes.

Q. In the email you say, "Lester will be here at 2:00 p.m. thursday, let's talk about the claims we want to add and look for the supporting documentation." Do you see that?

A. Yes.

Q. Now, at this time, you also asked Lester Vincent to send you copies of patent applications, right?

A. Which patent applications?

MR. OLIVER: May I approach, Your Honor?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a copy of CX-1951, it's a letter to you from Lester Vincent dated November 12th, 1992. It reads, "In response to your request, enclosed are copies of the following Rambus patent

applications." Do you see that?

A. Yes, I do.

Q. Now, does this refresh your recollection that you requested a number of Rambus patent applications from Lester Vincent?

A. Yes, it does.

Q. And Mr. Vincent did, in fact, send copies of these patent applications to you, didn't he?

A. I can only assume that he did.

MR. OLIVER: Your Honor, at this time complaint counsel moves to admit CX-1951 into evidence.

MR. PERRY: No objection.

JUDGE McGUIRE: Entered.

(CX Exhibit Number 1951 was admitted into evidence.)

BY MR. OLIVER:

Q. Now, in December 1992, you attended the next JEDEC meeting, right?

A. I think it was in December. So, yes, I did attend another JEDEC meeting, it's probably in December.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Go ahead.

MR. OLIVER: Your Honor, this is a document we used this morning, I will give opposing counsel a

moment to reach it.

MR. PERRY: I've got it.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked as JX-14, these are the minutes from the December 9 and 10, 1992 meeting. Does this refresh your recollection that the next JEDEC meeting was, in fact, held in December 1992?

A. Yes, it does, yes.

Q. And you attended this meeting, right?

A. Yes, I believe I did.

Q. You see the front page, about two-thirds of the way down, you see your name listed?

A. Yes, that's right.

Q. And David Mooring also attended this meeting, right?

A. That's correct.

Q. In fact, these are the set of minutes that we looked at this morning when we looked at some of the draft language that Mr. Townsend showed. Do you recall that?

A. I think I recall that.

Q. We looked at the draft section of 8.3 and 8.31 and compared those to the final version of the 21-I manual. Do you recall that?

A. Well, I don't remember the specific numbers, but I do remember the comparison we made.

Q. And that was from these minutes of December 1992, right?

A. I think that's right.

Q. Now, you recall this morning we also looked at an email from Mr. Mooring that he sent following this December 1992 meeting?

A. Yes, I recall looking at that email.

Q. And this is the email which Mr. Mooring reported that IBM raised the issue that they were aware of some voting JEDEC attendees that had patents pending on SDRAMs that they had not made the committee aware of.

Do you remember that?

A. I think I remember that, yes.

Q. Now, one week after this December 1992 JEDEC meeting, Rambus produced a document entitled Architectural Issues. Do you recall that?

A. I don't really recall it, no.

MR. OLIVER: May we have just a moment, please, Your Honor. I'm sorry, Your Honor, I skipped ahead a bit to try to save a bit of time.

JUDGE McGUIRE: That's a good idea, I'm all in favor of that. As we're talking on time, let me just

ask you how much more time do you intend to go this afternoon?

MR. OLIVER: We had agreed not to go too late this evening, Your Honor. I think I can reach a breaking point within the next 25 or 30 minutes.

JUDGE McGUIRE: Okay. All right, very good.

MR. PERRY: That's fine.

MR. OLIVER: May I approach, Your Honor?

JUDGE McGUIRE: Yes, you may.

BY MR. OLIVER:

Q. Mr. Crisp, I've handed you a document marked CX-1821, it bears the caption Architectural Issues, date in the lower left-hand corner in small print, December 18, 1992. Do you see that?

A. Yes, I do.

Q. And the first page, under 1.2, Pressure Points, the fourth listing down is RDC. Those are your initials, right?

A. Those are my initials, but that's not the usage of them here.

Q. I see, that does not refer to you on this page?

A. That's correct, it does not refer to me on this page.

Q. If I could ask you to turn, please, to page 24. I would like to direct your attention specifically to

paragraph 161 at the bottom of this page. This is under the caption 2.5 of Value Added. Paragraph 161 reads, "More related to intellectual property protection, but get a copy of the SDRAM spec and check it for features we need to cover as well as features which violate our patents."

Do you see that?

A. Yes, I do.

Q. Does this refresh your recollection that as part of the architectural issues being planned by Rambus that Rambus planned to get a copy of the SDRAM standard and check it for features that it wanted to cover in its patents?

A. You know, I don't know that I've ever even seen this document. Obviously I had mentioned that I was going to get a copy of the SDRAM spec or whatever specs I could find.

Q. But this did not refresh your recollection that part of the plan reflected in the Rambus architectural issues was to get a copy of the spec and check it for features to be covered in Rambus patents?

A. I don't remember ever seeing this document. I don't know anything about it.

Q. Independently of the document, has your memory been refreshed as to whether or not Rambus had a plan

to get a copy of the SDRAM spec and check it for features that needed to be covered in Rambus patents?

A. I really don't remember one way or the other on that. That might have been something that the HR guys were working on.

Q. Following your meeting with Lester Vincent in December of 1992 when you told him that you wanted to add claims to the patent applications regarding programmable CAS latency, you knew his law firm was working on preparing such amendments, right?

MR. PERRY: Objection, that's compound and overbroad.

MR. OLIVER: Your Honor --

JUDGE McGUIRE: Sustain. You can restate.

BY MR. OLIVER:

Q. Okay, thank you, Your Honor.

As of late 1992 and early 1993, you were aware that Lester Vincent's firm was working on claims for programmable CAS latency, right?

A. Well, I assumed they were, I had had discussions with Mr. Vincent about it, I told him about my beliefs that we had invented such technologies, that I thought they were in the Farmwald and Horowitz original patent application, and that if we didn't have good, solid protection on those particular inventions,

that I thought we should, and so my assumption was that he would follow through on it.

Q. And in fact, the purpose of your meetings with him was so that he would follow through, right?

A. I wouldn't characterize that as that purpose, I think that might have been one of many purposes. I think that each time, as you saw, we talked about different things.

Q. That's fair enough, but in any event, one of the purposes of the meeting with Mr. Vincent was for him to follow through with respect to claims relating to programmable CAS latency. Is that right?

A. I think that may have happened on at least a couple of meetings that we probably talked about that. I don't remember that we talked about it in every meeting that I had with Mr. Vincent.

Q. Now, in early 1993, a person by the name of Fred Ware took over responsibility for supervising the preparation of filing of amendments to Rambus's patent applications. Is that right?

MR. PERRY: Your Honor, that's vague as to whether he's asking him if he took over for Mr. Crisp, since there had been no such testimony that Mr. Crisp had that responsibility.

MR. OLIVER: Your Honor, I'll clarify.

JUDGE McGUIRE: All right, go ahead.

BY MR. OLIVER:

Q. In early 1993, a person named Fred Ware took over responsibility from you for working with Mr. Vincent to prepare amendments to Rambus's pending patent applications, right?

A. Well, I don't think I agree with that. I don't think I ever had the responsibility of specifically driving those issues. I had meetings with Mr. Vincent and I offered suggestions for patent claims that I thought we should have, if we didn't have them already, and I gave him information that I thought would be helpful for him. But I wouldn't say that I was chartered or had that responsibility in the organization.

Q. Well, let's take a look at a couple of emails. May I approach, Your Honor?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. All right, Mr. Crisp, we've handed you a document marked CX-686, it consists of an email from you to Ware dated February 9, 1993. Do you see that?

A. Yes, I do.

Q. And the subject is Patent Stuff.

A. That's correct.

Q. First of all, as of February 1993, who was Mr. Ware?

A. Mr. Ware is Fred Ware.

Q. Who was Fred Ware?

A. You mean -- I don't know how to answer your question.

Q. He was an engineer within Rambus. Is that correct?

A. Oh, you mean what was his position?

Q. Yes.

A. With the company. He was an engineer in the architectural group inside of Rambus.

Q. And he reported to vice president Allen Roberts. Is that right?

A. I think he reported to John Dillon, actually. And John Dillon reported to Allen Roberts.

Q. So, he was within the reporting chain of vice president Roberts?

A. That's correct, yes.

Q. Now, taking a look at email CX-686, you see there are a number of lines with arrows in front of them?

A. Yes.

Q. That is an embedded email that you received, right?

A. That's right.

Q. And it's addressed to Richard, that would be you?

A. Yes, that's right.

Q. That's an email you received from Fred Ware, right?

A. Yes, I believe that's correct.

Q. And the portion of the email without the arrows in front of them is your response to Mr. Ware?

A. That's right, that was my reply to him.

Q. So, Fred Ware was writing to you, "Richard, do you have a list of claims which were under consideration for addition to the original patent," right?

A. That's what he said there, yes.

Q. And you wrote a response back to him listing four items?

A. Yes, I think I wrote this email with those four items there.

Q. Now, item number 1, "DRAM with programmable access latency."

A. That's right.

MR. OLIVER: Your Honor, may I approach the table?

JUDGE McGUIRE: Go ahead.

BY MR. OLIVER:

Q. And again, that's technology relating to programmable CAS latency that was discussed earlier at JEDEC, right?

A. Well, I think it is broader than that.

Q. In other words, programmable access latency in your email is broader than programmable CAS latency as discussed in JEDEC, right?

A. That's correct.

Q. Now, item number 2, "DRAM with multiple open rows." Do you see that?

A. Yes.

MR. OLIVER: Your Honor, may I approach the table again?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. And again, that's a technology that is related to but broader than two banks as discussed within JEDEC?

A. That would be my opinion, yes.

Q. And then number 4, "DRAM using PLL/DLL circuit to reduce input buffer skews." That was technology that you discussed with Lester Vincent in the September 1992 meeting, right?

A. I discussed it with Mr. Vincent, I'm sorry I

don't remember the date that it was. We established it earlier today, I just don't remember what that date is.

Q. Now, a week and a half later, you sent a follow-up email to Fred Ware -- I'm sorry, Your Honor, could I have just a moment, please?

JUDGE McGUIRE: Yeah, go ahead.

MR. OLIVER: I'm sorry, Your Honor.

A week and a half later, you sent a follow-up email to Fred Ware identifying another technology that you forgot to include in your list, right?

THE WITNESS: That's possible, I don't remember.

MR. OLIVER: May I approach?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. I've handed you a document marked CX-691, it consists of an email from you to Fred Ware, CC vice president Roberts, dated February 20, 1993. Do you see that?

A. Yes, I do.

Q. And the subject there is Patent.

A. Yes.

Q. And the text there reads, "One additional claim worth making sure we get on the old patents is on where the voltage reference is provided to a dynamic memory

chip for setting the input receiver's thresholds."

Do you see that?

A. Yes, I do.

Q. It then continues, "This should help confound the GTL effort." Do you see that?

A. Yes, I do.

MR. OLIVER: Your Honor, may I approach the table?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. I'm sorry, Your Honor, I was on the right page. Referring to number 4 there, your reference in the email to a voltage reference, that's the same technology in item 4, external reference voltage, that we had seen discussed earlier at a JEDEC meeting. Isn't that right?

A. It's probably very similar, if it's not the same.

Q. Now, in the same month, February 1993, CEO Geoff Tate sent an email to all staff regarding SDRAMs, right?

A. I'm sorry, I don't remember that email.

MR. OLIVER: May I approach, Your Honor?

JUDGE McGUIRE: Yes.

BY MR. OLIVER:

Q. I've handed you a document marked CX-688, it consists of an email from Geoff Tate to staff dated February 16, 1993. Now, you would have received this document at the time it was sent. Is that correct?

A. Yes, I would have.

Q. And in this email, Mr. Tate summarizes certain points that he picked up from two different articles in the EE Times and Electronic News. Do you see that?

A. Yes, I see that.

Q. And Mr. Tate noted that NEC was aligned with the JEDEC standard. Do you see that? It's about halfway down the first page.

A. Yes, that's right.

MR. PERRY: Objection, misstates the document.

JUDGE MCGUIRE: I'm sorry, Mr. Perry?

MR. PERRY: My objection was that he misread the document when he was trying to describe it.

JUDGE MCGUIRE: Could you reread.

BY MR. OLIVER:

Q. Your Honor, I will read the exact language from the document.

Looking at the caption or at a line about halfway down the first page, there's a line that reads, "NEC claims it is 'aligned' with JEDEC standard." Do you see that?

A. Yes, I see that. I'm sorry, I didn't know whether you guys were still dealing with the objection or if this was a question of me. Pardon me.

Q. But you do see that reference?

A. Yes, I do see that reference.

Q. Now, at that time, NEC was a DRAM manufacturer. Is that right?

A. Yes, that's correct.

Q. And then the reference below that, Toshiba, Fujitsu, Hitachi, Mitsubishi, Micron, all say they'll sample in second half and line up with JEDEC standard." Do you see that?

A. Yes, that's right. And I think these were kind of talking about how there were different SDRAM standards, some of them were NEC and JEDEC and Samsung standards.

Q. Well, NEC claims it was aligned with the JEDEC standard, right?

A. That's right. That's right. Yeah, just going by the document.

Q. And according to the document, Toshiba, Fujitsu, Hitachi, Mitsubishi and Micron all say that they will line up with the JEDEC standard as well, right?

A. That's what I see on the document here, yes.

Q. Now, the next regularly scheduled meeting of the JC-42.3 subcommittee was March 1993, right?

A. I don't remember what the date was.

MR. OLIVER: May I approach?

JUDGE McGUIRE: You may.

MR. OLIVER: Your Honor, I note that it's shortly after 5:00, I'm just going to take a little longer than I anticipated getting to my next breaking point.

JUDGE McGUIRE: Sure.

MR. OLIVER: I leave it up to you, Your Honor, whether you would like to continue on for a little while longer or break for the day at this point.

JUDGE McGUIRE: Mr. Perry, you look like you have something to say in reference to this.

MR. PERRY: I think we should break, Your Honor, there's no chance we're going to finish direct of Mr. Crisp tonight and we have nothing else scheduled on Thursday so we should be able to get to it by then.

JUDGE McGUIRE: Why don't we take a break. I think we've had a pretty long day. Are there any other issues that should come up this afternoon before I adjourn? Anything else, Mr. Perry?

MR. PERRY: No, Your Honor.

JUDGE McGUIRE: Then let's take a break for the

evening and then we'll reconvene on the 28th at 9:30
a.m. Thank you.

**(Whereupon, at 5:05 p.m., the hearing was
adjourned.)**

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C E R T I F I C A T E O F R E P O R T E R SDOCKET/FILE NUMBER: 9302CASE TITLE: RAMBUS, INC.HEARING DATE: MAY 27, 2003

I HEREBY CERTIFY that the transcript contained herein is a full and accurate transcript of the notes taken by me at the hearing on the above cause before the FEDERAL TRADE COMMISSION to the best of my knowledge and belief.

DATED: 5/27/03

Susanne Bergling

Sally Jo Bowling**C E R T I F I C A T E O F P R O O F R E A D E R**

I HEREBY CERTIFY that I proofread the transcript for accuracy in spelling, hyphenation, punctuation and format.

Sara J. Vance