

**UNITED STATES OF AMERICA  
BEFORE FEDERAL TRADE COMMISSION**

**PUBLIC**

In the Matter of

RAMBUS INCORPORATED,

a corporation.

Docket No. 9302

**COMPLAINT COUNSEL’S OPPOSITION TO RAMBUS INC.’S REQUEST TO  
EXCLUDE THE DEPOSITION TESTIMONY OF DR. K.H. OH**

Complaint Counsel respectfully submits this memorandum in response to Rambus Inc.’s objections to the deposition testimony of Dr. K.H. Oh.

**I. INTRODUCTION**

Rambus attempts to exclude highly probative and reliable testimony from an important witness in this case by misapplying FTC evidentiary rules, which require the admission of “[r]elevant, material, and reliable evidence.” FTC Rule of Practice 3.43(b). Dr. Oh, a prominent engineering professor and former Hyundai executive who resides in Korea and is unavailable to testify live at this proceeding, provided deposition testimony based on his extensive personal knowledge of the DRAM industry. Rambus now attempts to exploit Dr. Oh’s unavailability in an effort to exclude harmful testimony to its case, including facts related to lock in, the importance of an open architecture, industry desire for evolutionary technology, and the

appropriate remedy. Despite Rambus's efforts to avoid Dr. Oh's damaging testimony on several key issues, Dr. Oh's statements are relevant and reliable, and should be admitted in this proceeding for Your Honor to review.

## **II. ARGUMENT**

The fundamental standard for admissibility of evidence in FTC administrative hearings is set forth in FTC Rule of Practice 3.43(b), which provides: "Relevant, material, and reliable evidence shall be admitted." The Commission itself consistently has ruled that "all relevant and material evidence – whether hearsay or not – is admissible, as long as it is reliable." *In the Matter of American Home Products Corp.*, 98 F.T.C. 136, n.9 (1981). The Commission has further observed that "one of the purposes in establishing [tribunals such as the FTC] was to devise a way whereby the exclusionary rules of evidence would be eliminated as a bar to common sense resolution" of cases. *In the Matter of Philadelphia Carpet Co.*, 64 F.T.C. 762, 773 (1964).

Because Dr. Oh's testimony is relevant, material, and reliable, it should be admitted under Rule 3.43(b). Complaint Counsel submits that there is no basis to object to the testimony of Dr. Oh. Even in the unlikely event that Your Honor were to entertain any of the issues raised by Respondent, the appropriate solution would not be the draconian approach urged by Respondent of wholesale exclusion of large amounts of testimony of an important foreign witness otherwise absent from these proceedings, but rather to consider such issues when evaluating the weight to be attached to the testimony in question.

**A. Dr. Oh Has Extensive Experience in the DRAM Industry and Brings an Important Perspective to this Proceeding**

Dr. Oh has an extensive engineering background and currently serves as a professor at the Korea Advanced Institute of Science and Technology. From 1987 through 1999, he held a variety of positions at Hyundai Semiconductor<sup>1</sup> and oversaw all aspects of the business. *See generally* Oh (1/8/03) Dep. at 8:18-13:6. In the early 1990's, Dr. Oh served as Senior Vice President in charge of semiconductor research and development. In 1994, he was the Senior Executive Vice President responsible for Hyundai Semiconductor's entire sales and marketing division. During his final years at Hyundai, Dr. Oh served as Senior Executive Vice President in charge of Hyundai's entire worldwide semiconductor operation.

Based on his wealth of experience at Hyundai, Dr. Oh processes the unique perspective of a senior executive of a foreign company in the DRAM business. Foreign companies are a vital component of JEDEC. As Desi Rhoden, Chairman of the JEDEC Board of Directors, stated "We [JEDEC] have companies from around the world . . . companies around the world [] come together to set standards on a variety of things." Trial Tr. (5/1/03) at 238:10-14, 294:22-23. Although many foreign companies are involved in JEDEC, few foreign witnesses will testify in this proceeding due to jurisdictional issues, language difficulties, and the burden of foreign travel. Thus, Dr. Oh is one of only a few foreign witnesses in this matter and the only high level representative of a foreign company to testify in this proceeding.

Dr. Oh graciously agreed to submit to a deposition in this matter in January 2003, at a time when his schedule permitted a deposition to be conducted in the United States. As Dr. Oh

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<sup>1</sup> Hyundai is now known as Hynix Semiconductor.

resides in Korea, Complaint Counsel is entitled to use his deposition pursuant to FTC Rule of Practice § 3.33(g)(iii)(B).

**B. Rambus's Objections Are Limited to Specific Questions and Answers and Do Not Encompass Dr. Oh's Entire Testimony**

Although Rambus's objections were tailored to specific questions and answers, Rambus's conclusion implies that it is seeking the broad and sweeping remedy of excluding Dr. Oh's testimony in its entirety. Based on prior correspondence with Rambus's counsel [Tab 1], in which Rambus's counsel indicated they would not object to the use of Dr. Oh's transcript beyond the objections to specific questions and answers indicated in the marked up copy of the transcript [Tab 2], and in light of the fact that the deadline for motions in limine has passed, Complaint Counsel interprets Rambus's memorandum as not seeking general preclusion of Dr. Oh's testimony, but rather as supporting narrow objections to specific questions and answers. Thus, each of Respondent's objections must be reviewed individually.

**C. Substantial Portions of Dr. Oh's Testimony Are Unrelated to Rambus's Objections**

First, much of Dr. Oh's testimony does not involve the documents at issue and thus is outside the scope of Rambus's memorandum. For example, without referring to any exhibits, Dr. Oh explained why the DRAM industry is locked into using SDRAM and DDR SDRAM designs.

Q. . . . when you first learned of the Rambus patent suit last year, did you think at that time or did you give any thought at that time as to whether Hyundai could go back and change its SDRAM and DDR SDRAM designs to work around the Rambus patents?

A. You mean last year? [2002]

Q. Yes.

A. It's too late.

Q. Why is it too late?

A. Our customers start – I mean, all the customers in the world start to use this. No way you can change it.

Q. Why not?

A. Of course, customers will not change it. I mean, they – it's – it cost a lot to change the design. You have to – changing means that changing all the usage of customer, I mean, the computers. You have to change the – their customer's mind. It means – it's impossible, almost impossible.

Oh (1/9/03) Dep. at 231:17-232:11. *See also* Oh (1/8/03) Dep. at 76:25-77:7 (Dr. Oh testified about Rambus's failure to notify Hyundai in 1995 that Rambus had patents or patent applications that would apply to JEDEC-complaint SDRAMs.).

Dr. Oh also offered important testimony, which Rambus did not object to as lacking foundation, regarding the scope of Complaint Counsel's proposed remedy. As Dr. Oh explained, all SDRAMs and DDR SDRAMs manufactured by Hyundai (now Hynix) either originate in or pass through Korea before being exported and sold in the United States. *See* Oh (1/8/03) Dep. at 19:9-20:25. This testimony supports the contention that if the remedy in this case does not reach Rambus's Korean patents, then Rambus will be able to assert its Korean patents against all SDRAMs and DDR SDRAMs produced by Hynix and ultimately sold in products to American consumers. The above passages, and many more not cited, illustrate how Dr. Oh's testimony generally is unrelated to Rambus's objections.

**D. Dr. Oh's Testimony Is Reliable Because He Answered Questions Based on His Own General Knowledge, Stemming from Years of Experience in the DRAM Industry**

In Rambus's Memorandum in Support of its Objections to the Deposition Testimony of Dr. K.H. Oh ("Rambus Mem."), Rambus ignores the fact that even when documents were used,

Dr. Oh testified based on his extensive experience in the DRAM industry and with Hyundai, not the exhibits used in his deposition.<sup>2</sup>

During Dr. Oh's deposition Complaint Counsel, in part to avoid language difficulties, used several documents as a tool to structure the deposition. Dr. Oh testified based on his personal knowledge of the DRAM industry, Hyundai's business, and Hyundai's interaction with its customers. Although Complaint Counsel referred to certain terms in various documents, many of the questions asked not about the specific documents, but about Hyundai's general business practices.

For example, Complaint Counsel directed Dr. Oh's attention to Exhibit 7, a document prepared by individuals Dr. Oh supervised,<sup>3</sup> and then asked Dr. Oh for his understanding of why Hyundai generally prepared such material. Dr. Oh explained, independent of Exhibit 7, that Hyundai prepared planning materials regarding future chip set support because they are essential to the operation of memory and it takes a long time to design chipsets.

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<sup>2</sup> Rambus alleges that Dr. Oh's entire testimony is unreliable because several exhibits were not prepared by Dr. Oh and therefore he "could easily be mistaken in his testimony about unfamiliar documents . . . ." Rambus Mem. at 4-5. It is important to note that just last week Respondent questioned Desi Rhoden about a document he had never seen before.

Q. Do you remember getting this particular memo?

A. I do not.

...

Q. Well, didn't you get this memo, this Exhibit 742?

A. Well, as I – as I testified a moment earlier, I do not recall receiving this memo.

Trial Tr. (5/2/03) at 607:4-5, 608:2-5.

<sup>3</sup> In reference to Exhibit 7, Dr. Oh testified that "all the context here, I'm very familiar with. I actually prepared those things with my people, and this just the derivatives of those documents." Oh (1/9/03) Dep. at 332:15-18.

Q. Dr. Oh, the court reporter has handed you a document that has been marked as Exhibit No. 7. . . . Dr. Oh, have you had a chance to look at this document?

A. Yes.

Q. Do you recognize this document?

A. Yes.

Q. What is it?

A. These are the – our – the memory product road map. This one is particularly for DRAM.

. . . .

Q. Okay. If I could direct your attention to the third line, it reads, “Subject: DDR Chipset campaign materials.” Do you see that?

A. Yes.

Q. Why did Hyundai prepare materials concerning a DDR chip set campaign?

A. Even though you have DDR memory, it cannot be used in the system alone, by itself. You should have chip sets to control, communicate with DDR memory, so you need to have both chips to be able to function within computer.

Q. Could I ask you to explain briefly what a chip set is?

A. Chip set is between processor and memory, is – controls the data in and out.

. . . .

Q. Why couldn't you simply wait until you'd completed your design of the DDR SDRAM and then go out to line up chip-set support?

A. It takes long to design the chip sets.

Oh (1/8/03) Dep. at 125:3-24, 127:3-129:4.

Similarly, Complaint Counsel referred Dr. Oh to a passage on page 126142 of Exhibit 7, but then asked Dr. Oh to testify based on his understanding of the term “open architecture.” Dr.

Oh testified independently of Exhibit 7 that his understanding of “open architecture” means “adopted by JEDEC.”

Q. Okay. I’d like to direct your attention to the next line. That reads, “Open architecture without royalties or fees.” Do you see that line?

A. Yes.

Q. First of all, what do you understand by the term “open architecture?”

A. It means adopted by JEDEC.

Q. Okay.

A. So that everybody can use.

Q. Was open architecture important to Hyundai?

A. Very much so.

Q. Why?

A. Because it means that it is adopted by JEDEC, and thus it requires no royalty or no fees at all.

.....

Q. Referring again to the second line of this page, “Open architecture without royalties or fees,” what was the basis for Hyundai’s understanding that DDR SDRAM would be free of royalties or fees?

[Objection omitted]

A. Because we actively attended JEDEC meetings to set – for the standardization of DDR, so naturally we – we hoped that and we expected that.

Oh (1/8/03) Dep. at 136:20-138:4.

Similarly, when asked about the term “price” on page 126142 of Exhibit 7, Dr. Oh made clear that his testimony was based on his understanding that the price to the customer is close to

the cost.

Q. With reference to the line of the document here, "Price will be close to SDRAM," does that refer to production cost, or does that refer to the price to the customer, or does that refer to some other price?

A. This price is, quote, is pretty general, and that means both, I think, in my mind, both the production cost. That's why the price to the customers will be close to that of SDRAM. That's what it meant.

Q. I see. Are you saying that the price to the customer is a function of the cost?

A. Certainly, yes.

Oh (1/8/03) Dep. at 140:2-13. When Dr. Oh's testimony is viewed in context, it is clear that he is testifying with respect to his general knowledge and understanding of the industry and Hyundai's business practices, not with respect to the specific accuracy of Exhibit 7.

Dr. Oh also answered questions about Exhibit 14, another Hyundai document, based on his own understanding:

Q. Dr. Oh, do you recognize Exhibit 14?

A. Yes.

Q. What is Exhibit 14?

A. This is a document for APAC Technology Forum by Hyundai.

Q. What is the APAC Technology Forum?

A. It is Asian-Pacific Technology Forum.

Q. What is the purpose of the APAC Technology Forum?

A. This is – this is to communicate where the – the PC moves, the PC – the companies' technology trends are and how we can – Hyundai can get ready for that or work with them to – to serve our customers.

Oh (1/9/03) Dep. at 211:5-17. As the testimony reveals, Dr. Oh is not discussing the accuracy of

Exhibit 14 itself, but is using it as a tool to explain why customers want evolutionary, not revolutionary technology:

Q. First I'd like to direct your attention to the last line at the bottom of [page 148851 of Exhibit 14]. It states, "Evolutionary Not Revolutionary." Do you see that line?

A. Yes.

Q. What does that line mean?

A. The means that this – this path is not revolutionary. It does not require much, much higher technology. It's just evolution of SDR to DDR.

....

Q. Did customers want evolutionary technology, or revolutionary technology?

[Objection omitted]

A. If they can take it, they certainly would like – love to have evolutionary parts.

Q. Why?

A. Why? It costs less and they can achieve the very stable parts with less money.

Oh (1/9/03) Dep. at 213:19-214:21. Likewise, Complaint Counsel used Exhibit 14 as a means to ask Dr. Oh to explain his understanding of why it took so long to develop and introduce the revolutionary RDRAM architecture:

Q. This document here is dated April 1999. Why is it that – that, two years after Hyundai signed the amendment with Rambus to provide the technology for Direct RDRAM, that Direct RDRAM still was not fully proven?

A. This is exactly what I have been trying to tell you and show you. In developing really revolutionary technology, just like Rambus, it takes long time, and you said this is – we signed on Direct Rambus in March, I believe. This is almost two, three years, and has not been proved, so that clearly demonstrates that it takes a long time for DRAM manufacturer to develop a new revolutionary products.

Oh (1/9/03) Dep. at 221:2-15.

This pattern of Dr. Oh testifying with respect to his independent understanding is repeated throughout his testimony. Dr. Oh's specific informative responses to the questions demonstrate that he in fact had an extensive foundation for his testimony. When specific questions and answers are reviewed, the transcript reveals that Dr. Oh provided knowledgeable, reliable testimony based on his personal understanding.

**E. Dr. Oh Was Very Knowledgeable about the Documents Used in His Deposition**

Dr. Oh also had ample foundation to testify generally about business terms and the structure of common Hyundai planning documents that he saw and used in the course of his business responsibilities. Even though Dr. Oh did not personally prepare many of the documents used as exhibits at this deposition, in every instance he demonstrated a thorough understanding of the substance of the particular document in question. *See generally* Oh (1/9/03) Dep. at 357:17-368:25 (establishing foundation for Exhibits 1-12); *see also* Oh (1/8/03) Dep. at 131:3-132:10 (establishing foundation for Exhibit 7). The documents used in Dr. Oh's deposition were a type routinely prepared by Hyundai in the normal course of business. The documents reflected Hyundai's typical business and planning activities and Dr. Oh routinely received these and similar documents as part of his duties. As Dr. Oh repeatedly explained, he was "very familiar" with the substance of the documents, even if he could not recall having seen each individual one. Oh (1/9/03) Dep. at 328:17-18.

One example is Exhibit 2. *See* Oh (1/8/03) Dep. at 39:13-21, 41:9-42:18 (establishing foundation for Exhibit 2). Dr. Oh testified that he directed the meeting at which Exhibit 2 was distributed. He does not recall specifically receiving the document at the meeting, but is certain

that he did. Most important, of course, is Dr. Oh's testimony that he was responsible for the contents of Exhibit 2 and thus knows the contents extremely well.

Still, Rambus accuses Dr. Oh, a very experienced engineer, with producing "unreliable" testimony because he "speculate[d]" about the meaning of the common technical terms "ES" and "CS" in Exhibit 13. Rambus Mem at 3-4. In fact, in the prior day's testimony, Dr. Oh stated that he was very familiar with the common terms "ES" and "CS" from his years of experience seeing similar documents at Hyundai. Oh (1/8/03) Dep. at 142:5-144:6.

Q. Okay. Looking at the table in top part of the page [of Exhibit 7], there are two headings, "ES" and "CS(MP)." First of all, what does "ES" mean?

A. Engineering sample.

Q. And could you explain in somewhat more detail what that means?

Oh (1/8/03) Dep. at 142:5-142:10. Dr. Oh went on to describe how engineering samples were used at Hyundai. Dr. Oh provided similar testimony regarding the term "CS":

Q. Okay. And if you could look at the next heading, "CS(MP)." What does that heading mean?

A. "CS" means customer – commercial sample, and "MP" means mass production.

Oh (1/8/03) Dep. at 142:25-143:4. Dr. Oh continued his explanation of how ES and CS were used at different stages in the production process. Oh (1/8/03) Dep. at 143:5-144:6. Once again, when viewed in context, it is clear that Dr. Oh's testimony is reliably based on his personal knowledge and should be admitted under FTC evidentiary rules.

#### **F. The Chart Dr. Oh Used to Refresh His Recollection Is Trivial**

Rambus also argues that Dr. Oh's testimony is unreliable because he referred to a chart prepared with his counsel to refresh his recollection concerning a complicated time line. Rambus

Mem. at 5. The chart Dr. Oh used merely listed the specific dates that Hyundai worked on and first introduced sales of certain products. It was compiled from other documents produced by Hyundai, and Respondent's counsel was provided a copy. Dr. Oh's deposition was not intended to be a memory test. In any event, the witness consulted the chart in response to only a few questions. *See* Oh (1/9/03) Dep. at 353:1-24. To the extent that there is any issue, it should go to the weight, not the admissibility, of the small number of answers relating to specific dates on which Hyundai worked on or introduced a particular product.

**G. The Court Should Also Overrule Rambus's Objections Regarding Leading Questions**

Rambus also objected to portions of Dr. Oh's testimony as being leading. Although Rambus did not specifically address these additional objections in its memorandum, Complaint Counsel would like to take this opportunity to discuss why they should also be overruled. First, leading questions are appropriate to help structure the testimony of a foreign witness. *See U.S. v. Rodriguez-Garcia*, 983 F.2d 1563, 1570 (permitting leading questions in a "language situation" where leading questions were "necessary to develop the witness' testimony."). As in *Rodriguez-Garcia*, English is not Dr. Oh's native language, and while he is proficient in English, Complaint Counsel occasionally used leading questions to ensure clear communication. Second, the questions Complaint Counsel posed to Dr. Oh were not leading. A question that requires a yes or no answer is not necessarily leading. Finally, even if a small number of Complaint Counsel's questions were construed as leading, in almost every instance Complaint Counsel either followed up its "guidepost" question with an open-ended question or summarized prior witness testimony to ensure that language issues did not render the record unclear. Dr. Oh's important, substantive

testimony flows from these broad questions. Accordingly, the purposes underlying the preference for non-leading questions – ensuring testimony is that of the witness and not the lawyer – are fully satisfied here.

### **III. CONCLUSION**

For the above stated reasons, Rambus’s various individual objections to the admission of specific portions of Dr. Oh’s testimony should be overruled.

Respectfully submitted,

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Dated: May 12, 2003

**CERTIFICATE OF SERVICE**

I, Melissa Kassier, hereby certify that on May 12, 2003, I caused a copy of the following materials:

1. Complaint Counsel's Opposition to Rambus Inc.'s Request to Exclude the Deposition Testimony of Dr. K.H. Oh,

to be served upon the following persons:

by hand delivery to:

Hon. Stephen J. McGuire  
Chief Administrative Law Judge  
Federal Trade Commission  
600 Pennsylvania Avenue, NW  
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and by electronic mail and overnight courier to:

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