UNITED STATES OF AMERICA
BEFORE FEDERAL TRADE COMMISSION

Public Version

In the Matter of RAMBUS INCORPORATED, a corporation.	Docket No. 9302

SUPPLEMENTAL MEMORANDUM IN SUPPORT OF COMPLAINT COUNSEL'S MOTION TO COMPEL DISCOVERY RELATING TO SUBJECT MATTERS AS TO WHICH RAMBUS'S PRIVILEGE CLAIMS WERE INVALIDATED ON CRIME-FRAUD GROUNDS AND SUBSEQUENTLY WAIVED

In the early 1990s, Respondent Rambus Inc. ("Rambus") commenced a scheme to monopolize that continues to this day. Rambus's scheme specifically involved its lawyers to assist it in accomplishing its goal of secretly ensuring that it could enforce its patents, as ultimately issued against companies manufacturing and using memory products that complied with JEDEC standards. The unlawful scheme began with Rambus's attendance at JEDEC, a standard-setting organization with a committee focusing on computer memory chips. While a member of this JEDEC committee, Rambus failed to disclose a patent and various patent applications relating to JEDEC work, in violation of its obligations under JEDEC policies and rules, and engaged in misleading partial disclosures that cemented the belief of JEDEC members that the standards under consideration did not call for the use of Rambus's patented technology. During the same time period, without informing JEDEC, Rambus also planned, drafted and filed a series of amendments to its pending patent applications to add claims, specifically directed at

the work of JEDEC, in order to ensure that Rambus's patents would cover the JEDEC standards. The scheme continued after Rambus terminated its membership in JEDEC. Rambus continued its efforts to broaden its patents to cover JEDEC standards, while intentionally concealing the scope of its patent rights from JEDEC members. After ultimately obtaining patents containing claims covering technologies incorporated in the JEDEC standards, Rambus compelled industry members into agreeing to pay royalties through threat of lawsuits and, in some cases, suing companies that resisted Rambus's demands.

The Commission's Complaint in the matter alleges an antitrust violation, of course, not fraud. However, many of the same facts at issue in this litigation also demonstrate that Rambus's conduct, in addition to constituting, *inter alia*, unlawful monopolization under Section 5 of the FTC Act, also amount to a fraudulent scheme to deceive. Thus, although Complaint Counsel need not prove fraud to establish an antitrust violation under the Commission's Complaint, the available evidence in this matter is more than sufficient to support a finding that Complaint Counsel have made a *prima facie* showing of fraud.

Judge Payne of the Eastern District of Virginia, Judge McKelvie of the District of Delaware, and Judge Timony were all correct to apply the crime-fraud doctrine to invalidate Rambus's claims of privilege. Rambus has used its lawyers to help perpetrate every step of its scheme. Rambus has consulted its lawyers in order to understand the risks of participating in JEDEC. Rambus representatives have passed on to their lawyers the technological concepts (many of which they observed at JEDEC) over which they wanted to obtain patent rights. Throughout the entire time period at issue, and continuing today, Rambus relied and still relies on its lawyers to draft and file the desired patent claims, and to prosecute the resulting patent applications, to ensure patent coverage over technologies incorporated in the JEDEC standards.

Ultimately, of course, Rambus relied on its lawyers to enforce its issued patents; Rambus's lawyers were responsible not only for implementing Rambus's "strategic" licensing program, but also, for suing recalcitrant target companies. Judge Timony was correct that Complaint Counsel made a sufficient *prima facie* showing that "Rambus was involved in an on-going fraud post-June 1996 concerning the RAM patents it held and had applied for to permit discovery under the crime-fraud exception." Order, February 28, 2003.

Judge Timony was also correct in finding that Rambus has produced documents and testimony relating to the subject matter to Hynix voluntarily. Thus, the prerequisites for finding that Rambus has waived privilege to the subject matter has also been established.

This issue has been the subject of extensive briefing, and Complaint Counsel does not seek to repeat past briefing. Rather, Complaint Counsel intend to use this brief (1) to identify arguments that have been briefed previously, and (2) to pull together and summarize the evidence demonstrating that Rambus violated its obligation to disclose to JEDEC a patent and pending patent applications relevant to on-going JEDEC work.

Argument

There are two grounds on which Rambus's claims of attorney-client privilege should be rejected. First, Rambus's claims should be rejected because their communications with attorneys were used to further a fraudulent scheme to obtain and enforce patents that covered standards for memory chips promulgated by JEDEC. Second, the privilege should be invalidated because Rambus has waived its claims of privilege by voluntarily disclosing documents relating to the subject matter of its fraudulent scheme to Hynix, despite its claims of privilege. For the reasons set forth herein, Complaint Counsel's Motion to Compel Discovery should be granted on both grounds.

I. Rambus Used Its Attorneys' Services to Further an Ongoing, Unlawful Scheme, and Thus Any Claims of Privilege Should Be Pierced as Part of a Crime or Fraud.

The "seal of secrecy between lawyer and client does not extend to communications made for the purpose of getting advice for the commission of a fraud or crime." *United States v. Martin*, 278 F.3d 988, 1001 (9th Cir. 2002) (internal quotations omitted). In short, "the privilege . . . does not outweigh society's interest in full disclosure when legal advice is sought for the purpose of furthering the client's ongoing or future wrongdoing." *In re BankAmerica Corp. Securities Litigation*, 270 F.3d 639, 640 (8th Cir. 2001). Here, as Complaint Counsel has shown, Rambus's attorneys' involvement was integral to its fraudulent scheme in as much as they directly participated in drafting patents to cover the JEDEC standards and then later sought, at Rambus's behest, to enforce those patents. Only through the attorneys' participation was Rambus able to secure the financial fruits of its fraudulent conduct.

A. Rambus Engaged, and Continues to Pursue, a Fraudulent Scheme

Rambus has engaged in an unlawful scheme that continues to the present day to assert patents against, and collect royalties for, use of technologies incorporated in what are intended to be open standards available to all industry members. While the Commission's Complaint in this matter alleges an antitrust violation, which involves a legal standard substantially different from the standards that govern claims of common-law fraud, the evidence also establishes each of the elements of common-law fraud: Rambus made "(1) a false representation, (2) of material fact, (3) . . . intentionally and knowingly, (4) with intent to mislead," upon which (5) JEDEC members relied, and from which (6) damages flowed. *Bank of Montreal v. Signet Bank*, 193 F.3d 818, 826 (4th Cir. 1999); *accord Vasquez v. Superior Court*, 4 Cal. 3d 800, 811 (1971) (fraud plaintiff must show that defendant "made false representations with knowledge of their falsity, that these

representations were made with intent to and did induce reasonable reliance by plaintiffs, and that plaintiffs suffered damages as a result"); *Tidewater Beverage Services, Inc. v. Coca Cola Co., Inc.*, 907 F. Supp. 943, 947 (E.D. Va. 1995) ("Under Virginia common law, the elements of fraud are: 'a false representation of a material fact, made intentionally and knowingly, with intent to mislead, reliance by the party misled, and resulting damage to the misled party.'"); *BMY--Combat Systems Div. of Harsco Corp. v. United States*, 38 Fed. Cl. 109, 128 (Fed. Cl. 1997) ("The four elements of common law fraud are: (1) misrepresentation of a material fact; (2) intent to deceive or a reckless state of mind; (3) justifiable reliance on the misrepresentation by the deceived party; and (4) injury to the party deceived through reliance.").

Each of the elements of fraud can be shown under the evidence available. Rambus intentionally misrepresented the material facts about whether its patent portfolio related to the standards under consideration at JEDEC. JEDEC's members and JEDEC itself reasonably relied on the accuracy of those statements. And, once Rambus sought to enforce its undisclosed patent claims, it caused injury to a variety of market participants, including the members of JEDEC.

1. Rambus Intentionally Made Material Misrepresentations. A false representation can be demonstrated by showing, *inter alia*, "affirmative misrepresentations" or "omission" or "concealment." *Bank of Montreal*, 193 F.3d at 827; *accord Allen Realty Corp. v. Holbert*, 318 S.E.2d 592, 597 (Va. 1984) ("Concealment of a material fact by one who knows that the other party is acting upon the assumption that the fact does not exist constitutes actionable fraud."); *Wilkins v. National Broadcasting Corp.*, 71 Cal. App. 4th 1066, 1082 (1999) (listing four circumstances "in which nondisclosure or concealment may constitute actionable fraud").[1] As

[1] Complaint Counsel argues on the basis of Virginia and California fraud law because those two states are among those with the closest connection to Rambus (which has its principal place of

part of its scheme, Rambus has engaged in fraud of both types: it failed to disclose in the face of a duty to do so, and it also made misleading partial disclosures that were intended to, and succeeded in, persuading JEDEC that Rambus did not have patents or patent applications that covered the technologies under consideration.

JEDEC's policy required the disclosure of patents and patent applications that related to standards under consideration. JEDEC implemented these rules in order to avoid "restricting competition, giving a competitive advantage to any manufacturer, [or] excluding competitors from the market." EIA Legal Guides (March 14, 1983) JEDEC0009270, at 9274 **[Tab 1]**; *see generally* Complaint Counsel's Memorandum in Opposition to Respondent Rambus Inc.'s Motion for Summary Decision 58-61 (filed March 26, 2003) ("Summary Decision Opp.") (setting out basis for JEDEC's policy). To implement its policy and associated rules, JEDEC adopted a disclosure policy, pursuant to which all members had an obligation to disclose patents and pending patent applications that might involve the work of a JEDEC committee. JEDEC leadership and its members, during the entire time that Rambus was a member, took steps to ensure that all members understood these obligations. *See generally* Summary Decision Opp. 58-67 (citing and quoting from a collection of JEDEC documents and testimony of a number of witnesses[2]). Through presentations, documents, and actual practice, all JEDEC members became aware of their obligations under the patent policy. *See generally* Summary Decision Opp. 68-83

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business in California) and JEDEC (which is headquartered in Virginia).

[2] This section of Complaint Counsel's Opposition to Summary Decision quoted from or cited: the EIA Legal Guides; the JEDEC Manual of Organization and Procedure, JEP 21-I; various JC-42.3 Committee Meeting Minutes; Mr. Townsend's memoranda entitled "Patent Issues in JEDEC"; the JEDEC Meeting Attendance Roster; JEDEC Ballot JC-42.3-92-83; testimony of JEDEC President and General Counsel John Kelly, JC-42.3 Subcommittee Chairman Gordon Kelley and JEDEC member representatives Mark Kellogg, Willi Meyer, Farhad Tabrizi and Brett Williams; as well as various memoranda summarizing the Quad CAS incident.

(quoting from testimony of three JEDEC employees and representatives of eleven JEDEC member companies[3]). Documentary and testimonial evidence confirm that Rambus understood the obligations it assumed as a JEDEC member. *See generally* Summary Decision Opp. 83-94.[4]

Despite the existence of a well-established policy requiring disclosure, Rambus failed — indeed refused — to disclose the existence of a patent and a number of patent applications that related to the technologies under consideration for inclusion in JEDEC standards.

In February, April and May 1992, Billy Garrett and Richard Crisp, respectively, observed proposals at JEDEC to incorporate programmable CAS latency and programmable burst length, among other technologies, into the proposed SDRAM standard. *See, e.g.*, EIA/JEDEC Minutes of Meeting No. 61 (February 27-28, 1992) R 65189 at 65209, presentation of NEC ("Programmable RAS, CAS latency"); R 65224, presentation of Hitachi ("Programmable RAS, CAS latency"); R 65228, presentation of Fujitsu ("programmable burst type and wrap [burst] length (4, 8, full column)") **[Tab 2]**; EIA/JEDEC Minutes of Meeting No. 62 (May 7, 1992) R 65286 at R 65316, presentation of NEC ("Programmable RAS, CAS latency using Register

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[3] Complaint Counsel's Opposition to Summary Decision quoted from the testimony of President and General Counsel John Kelly, JC-42.3 Subcommittee Chairman Gordon Kelley, JEDEC Secretary to the JC-42.3 Subcommittee Ken McGhee, JEDEC consultant Reese Brown, and JEDEC member representatives of Hewlett-Packard (Tom Landgraf); Hynix (Farhad Tabrizi); IBM (Mark Kellogg); Infineon (Willi Meyer and Gil Russell); Intel (Sam Calvin); Micron (Brett Williams); Mitsubishi (Sam Chen); NEC (Charles Furnweger and Gil Russell); Philips (Betty Prince); Samsung (Charles Donohoe) and Texas Instruments (Betty Prince).

[4] Complaint Counsel's Opposition to Summary Decision quoted from deposition testimony of Rambus's primary representative to the JEDEC JC-42.3 Subcommittee, Richard Crisp, in-house counsel Anthony Diepenbrock, outside patent counsel Lester Vincent, and former Vice President of Intellectual Property Joel Karp, as well as various e-mails written by Mr. Crisp to Rambus executives and others.

Command + Address key") **[Tab 3]**.[5] Shortly thereafter, Richard Crisp, acting through his boss, Allen Roberts, Rambus's Vice President responsible for intellectual property, instructed Rambus's patent counsel, Mr. Lester Vincent, to add claims to Rambus's pending patent applications to cover those two technologies. *See* Lester Vincent, Handwritten Notes (May 2 [or 12], 1992) R202989 ("Richard Crisp wants to add claims to original application => add claims to mode register to control [CAS] latency") **[Tab 5]**. Richard Crisp has admitted that the ideas he had to add claims to Rambus's pending patent applications were "spurred on" by his attendance at the April and May, 1992 JEDEC meetings.[6]

In September 1992, after observing yet more discussion at JEDEC involving programmable CAS latency, Richard Crisp **********

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[5] Richard Crisp admitted to having observed presentations of programmable CAS latency and burst length technologies at JEDEC. *See* Trial Transcript, *Rambus, Inc. v. Infineon Technologies AG* (May 2, 2001) at 118:10-23 **[Tab 4]**.

[6] Richard Crisp testified:

> Q And the ideas that you had to add claims to the Rambus patent applications for the mode register and for programmable CAS latency, those were ideas that were spurred on by your attendance at the JEDEC meeting in April and May and participating in this SDRAM standardization effort, right?
> A Yeah. Those were our inventions. We had invented those for the RDRAM.

Trial Transcript, *Rambus, Inc. v. Infineon Technologies AG*, (May 2, 2001) at 132:18-25 **[Tab 4]**.

[Tab 6]. In October, 1992, Richard Crisp was asked to give a report at the meeting of the Rambus Board of Directors on "the SDRAM status at JEDEC, [and] the Rambus patent strategy . . .." Minutes of a Regular Meeting of the Board of Directors (October 22, 1992) R 28106 at R 28107 **[Tab 7]**. ********** ********** ********** **[Tab 8]**. ********** ********** ********** ********** **[Tab 9]**.

The following month, in March 1993, Billy Garrett of Rambus attended the JEDEC meeting and watched the JC-42.3 Subcommittee adopt the SDRAM standard, including the earlier-approved item incorporating programmable CAS latency and burst length into the standard. JC-42,3 Committee Minutes of Meeting No. 66 (March 3-4, 1993) R 65628 at R 65634, paragraph 13; R 65677 **[Tab 10]**.

The following month, in April 1993, patent counsel Lester Vincent completed ********** ********** ********** **[Tab 11]**. Fred Ware informed Richard Crisp and others at Rambus:

> The current status of the additional claims that we want to file on the original (P001) patent follows. . . . (1) Writable configuration register permitting programmable CAS latency. This claim has been written up and filed. This is directed against SDRAMs.

Fred Ware, Email (June 18, 1993) R 202996 **[Tab 12]**.[7]

In January 1995, Lester Vincent filed ***************************************
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***[Tab 14]**.
This time, Lester Vincent got it right; **
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*****************************. See Expert Report of Prof. Bruce L. Jacob (December 10, 2002) ("Jacob") at 41-44 **[Tab 15]**; Rebuttal Report of Prof. Bruce L. Jacob (January 31, 2003) ("Jacob Rebuttal") at ¶¶ 4, 7-9 **[Tab 16]**; Expert Report of Mark E. Nusbaum (December 6, 2002) ("Nusbaum") at 27-30 **[Tab 17]**; Rebuttal Report of Mark E. Nusbaum (January 31, 2003)

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("Nusbaum Rebuttal") at 8-10 **[Tab 18]**.[8]

Rambus withdrew its **** application in ******** , but three weeks later Lester Vincent

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[Tab 20]; *see also* Jacob at 44-46 **[Tab 15]**; Jacob Rebuttal at ¶¶ 7-9 **[Tab 16]**; Nusbaum at 30-31 **[Tab 17]**; Nusbaum Rebuttal at 11-13 **[Tab 18]**.

In the latter half of 1995, Richard Crisp observed further work at JEDEC involving programmable CAS latency and burst length. During that time period, a spirited debate arose

[8] Rambus is likely to argue that the Federal Circuit decision in the *Infineon* litigation is somehow dispositive here, yet this clearly is not the case. To begin with, Complaint Counsel submits, and is prepared to prove, that the Federal Circuit majority's extremely narrow reading of the JEDEC disclosure obligation is incorrect. JEDEC itself made this clear in a recent *en banc* submission to the Federal Circuit. *See Amicus Curiae* Brief of JEDEC Solid State Technology Association in Support of Defendants-Appellees' Petition for Rehearing and Rehearing *En Banc*) [**Tab 19]**. In addition, the factual records, legal standards, and burdens of proof in this case significantly differentiate it from the *Infineon* fraud suit, as Rambus's own lawyers in this case have recognized. *See* Tr. of Aug. 2, 2002, Hearing at 13-14, *FTC v. Rambus* (Mr. Melamed: "Naturally, the focus of the parties and the focus of discovery" in the *Infineon* and *Micron* cases "was not principally on the issues that are central here"; "this . . . is a different case"). Finally, we would note that Infineon litigated its fraud claims in the context of a patent-infringement suit filed by Rambus. Infineon, understandably, was reluctant to submit any proof which might have the effect of demonstrating that Rambus's patents in fact do cover, or "read on," the JEDEC standards. Complaint Counsel, on the other hand, has no reason to show such reluctance in submitting proof concerning the scope and coverage of Rambus's patents. Thus, Complaint Counsel fully intends to present evidence demonstrating that, even if the JEDEC disclosure rule could reasonably be construed in the manner held by the Federal Circuit majority in *Infineon*, Rambus did – while participating as a member of JEDEC – possess at least one patent and several patent applications that "reasonably might [have been] necessary to practice the JEDEC standard." *Rambus Inc. v. Infineon Technologies AG*, 318 F.3d 1081, 1100 (Fed. Cir. 2003).

among JEDEC members as to whether they should adopt a simplified standard, known as SDRAM Lite, that would either use fewer CAS latency and burst length values or eliminate programmability entirely and use fixed CAS latency and burst length. See, e.g., Minutes of Meeting 76 (September 11, 1995) R 66450 at R 66455-56; R 66481-83 **[Tab 21]**. Richard Crisp also observed work directed toward the standard for "Future SDRAM" (which later became known as the DDR SDRAM standard) involving programmable CAS latency and burst length. *See, e.g.*, Minutes of Meeting No. 77 (December 6, 1995) R 66493 at R 66513 ("3.6.3 CAS Latency Survey Results") **[Tab 22]**.

Rambus clearly understood at the time that the claims contained in the **** and **** applications covered technology incorporated in JEDEC's SDRAM standard and proposed for use in JEDEC's Future (DDR) SDRAM standard[9]. For example, at the May, 1995 meeting of the JEDEC JC-42.3 Subcommittee, Chairman Gordon Kelley of IBM specifically asked Richard Crisp to "state whether or not Rambus knows of any patents especially ones we have that may read on" a presentation of SyncLink made at the JEDEC meeting. Richard Crisp, Email (May 24, 1995) R 155869 at R 155873 **[Tab 24]**. Crisp refused to answer. In his e-mail to Rambus executives, however, he stated, "As far as intellectual property issues go here are a few ideas: . . . 4. DRAM with programmable access [CAS] latency." *Id.* As explained below, at no time did Rambus disclose to JEDEC that it was working with its lawyers to draft claims to cover programmable CAS latency or burst length, or that it had it had such claims pending before the

[9] Although JEDEC had already adopted its SDRAM standard, Rambus had an ongoing obligation to disclose relevant patents and applications. *See, e.g.*, JEDEC Manual of Organization and Procedure. JEP-21-I (October 1993) Appendix F ("By its terms, the EIA Patent Policy applies with equal force to situations involving: 1) the discovery of patents that may be required for use of a standard subsequent to its adoption . . .") **[Tab 23]**.

Patent and Trademark Office.

Rambus also failed to disclose to JEDEC a patent and pending patent applications relating to on-going work involving technologies that ultimately were incorporated into JEDEC's DDR SDRAM standard. From the very first JEDEC meetings attended by Rambus engineer Billy Garrett in December 1991 and February 1992, certain JEDEC members were proposing to use a technology called "toggle mode," which is the functional equivalent of dual edge clocking technology. *See* Minutes of Meeting No. 60 (December 4-5, 1991) R 65095 at R 65139 (IBM presentation comparing "Synchronous DRAM -vs- HST Toggle") **[Tab 25]**; EIA/JEDEC Minutes of Meeting No. 61 (February 27-28, 1992) R 65189 at R 65198 (item 312.1, "Toggle Mode") **[Tab 26]**. By April 1992, IBM was proposing to combine its toggle mode concept with other proposals for synchronous DRAMs to create what would have been an SDRAM with dual edge clocking. *See* EIA/JEDEC Minutes of Meeting No. 62 (May 7, 1992), R 65286, Attachment E, R 65300 (JEDEC Special Meeting, April 9-10, 1992) at R 65301 (presentation of William Hardell of IBM, "dual clock edge") **[Tab 3]**.[10] However, a number of companies in the industry had difficulty generating symmetric clock signals (a prerequisite to implementing dual edge clock technology), so JEDEC decided to use a single edge clock in its SDRAM standard, and revisit dual edge clock technology for its next generation standard. *See* Sussman Tr. (January 15, 2003) at 45:21 - 49:17 **[Tab 28]**.

Several months thereafter, Richard Crisp began working with**********

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********** **[Tab 27]**.

********** **[Tab 6]**; ********** ********** **[Tab 9]**. Lester Vincent prepared a draft amendment containing claims covering on-chip PLL, which he sent to Richard Crisp and others for review. Lester Vincent, Letter (April 22, 1993) R 171671 ("Enclosed for your review are draft preliminary amendments for the above-referenced patent applications") **[Tab 29]**; see also Fred Ware, Email (June 18, 1993) R 202996 (regarding the status of additional claims Rambus wanted to file, "(3) DRAM with PLL clock generation. This claim is partially written up. . . . This is directed against future SDRAMs and RamLink.") **[Tab 12]**. Lester Vincent ********** ********** **[Tab 30]**.

In the spring and summer of 1994, Rambus continued ********** ********** **[Tab 31]**; **********

********** **[Tab 32]**.

After JEDEC adopted the SDRAM standard in 1993, it turned to a number of implementing details, such as specifying the pin layouts and packaging of specific products. By 1994, however, JEDEC also began early work on the next generation standard, known at first as "Future SDRAM" or "Next Generation SDRAM," and ultimately as "DDR SDRAM." At the September 1994 JEDEC meeting, as part of this work, NEC gave a presentation proposing to include on-chip PLL in the next generation SDRAM standard. *See* JC-42.3 Committee Minutes of Meeting No. 72 (September 13, 1994) R 66143 at R 66189 ("PLL Enable Mode. . . On-Chip-PLL Improves Access Time (tAC)") **[Tab 33]**. ********** **********. *See* Jacob at 46-47 **[Tab 15]**; Jacob Rebuttal at ¶ 10 **[Tab 16]**; Nusbaum at 36-37 **[Tab 17]**; Nusbaum Rebuttal at 13 **[Tab 18]**.

Richard Crisp recognized immediately the potential significance to Rambus of NEC's proposal. He wrote an e-mail to Rambus executives with the subject line, "NEC PROPOSES PLL ON SDRAM!!!" Richard Crisp, Email (September 14, 1994) R 69511 at R 69546 **[Tab 34]**. In the text he wrote:

> ******The big news here is the inclusion of a PLL enable mode option.******* . . . They plan on putting a PLL on board their SDRAMs . . .. Obviously we need to think about our position on this for potential discussion with NEC regarding patent issues here. **** I believe that we have now seen that others are seriously planning inclusion of PLLs on board SDRAMs. . . . What is the exact status of the patent with the PLL claim?****

Id. at 69546-47 **[Tab 34]**. Crisp's e-mail set off a flurry of e-mails within Rambus. *****

********** **[Tab 35]**.[11] ********** *****_Id._[12]

During the latter part of 1995 and early 1996, work involving both dual edge clock and on-chip PLL/DLL technology picked up at JEDEC. In May 1995, Hyundai (now Hynix), Mitsubishi and TI presented SyncLink proposals at JEDEC. One of the proposals involved a reference clock using "both edge[s] for input, positive edge for output." Minutes of Meeting No. 75 (May 24, 1995) JEDEC0016433 at JEDEC0016544 **[Tab 37]**.[13] In September 1995, JEDEC

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decided to issue a survey ballot to gauge member interest in certain "next generation issues." Minutes of Meeting No. 76 (September 11, 1995) R 66450 at 66456 **[Tab 21]**. The survey ballot was issued to members in October 1995, and the results were tabulated at the December 1995 meeting. Issues with strong support included "On-chip PLL/DLLs to reduce clock access time;" issues with mixed support included "Using both edges of the clock for sampling inputs." Minutes of Meeting No. 77 (December 6, 1995) R 66493 at 66510 **[Tab 22]**.[14] At the January, March and June 1996 JEDEC meetings, there followed a series of presentations incorporating dual edge clock and/or on-chip PLL/DLL technologies. See, e.g., Minutes of Interim Meeting JC-42.3 Committee (January 31, 1996) JEDEC0016752 at JEDEC0016768 ("Future SDRAM - Clock Issues" "PLL/DLL Circuits and/or Echo Clocks") **[Tab 39]**; Minutes of Meeting No. 27 [JC-42.5 Subcommittee] (March 19, 1996) JEDEC0021440 at JEDEC0021518 ("PLL + Register Buffered DIMM") **[Tab 40]**; Minutes of Meeting No. 78 (March 20, 1996) JEDEC0016776 at JEDEC0016839 ("SDRAM Features . . . On Chip PLL/DLL [100MHz] no [150 MHz] maybe [200-300 MHz] yes"), at JEDEC0016844 ("Future SDRAM - Clocking Scheme Limitation of PLL/DLL for Memory"), at JEDEC0016846 ("Data in sampled at both edge of Clock into memory") **[Tab 41]**; Minutes of Meeting No. 79 (June 5, 1996) R 66585 at R 66606 ("Latency, in the case of DLL on chip"), at R 66592 ("Double Data Rate Synchronous FSRAM") **[Tab 42]**.

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**********. *See* Jacob at 50-51 **[Tab 15]**; Nusbaum at 41-42 **[Tab 17]**.

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[14] At this meeting, Mosaid (a JEDEC member that engaged in technology development and licensing) announced that it had a pending patent application relating to on-chip DLL, but noted that "it was a particular implementation and may not be required to use the standard." *Id*. at 66495 **[Tab 22]**.

During this time, Rambus continued its efforts to broaden its patents to ensure that they would cover future SDRAMs. In February 1996, Rambus in-house counsel Anthony Diepenbrock met with Lester Vincent to discuss, among other topics, adding more claims covering DLLs and delay lock loops. Lester Vincent, Handwritten Notes (February 5, 1996) R 204207 at 204208, 204209 **[Tab 43]**. In early 1996, Rambus also learned that the PTO would soon issue as a patent its ******* application containing claims covering dual edge clock technology. Rambus immediately began assessing how it could assert the soon-to-be-issued patent against ********, a competing proprietary architecture that also used a dual-edge clocking scheme. ********** **[Tab 44]**; ********** **[Tab 45]**. ********** ********** ********** **[Tab 46]**. ********** ********** ********** ********** **[Tab 47]**. That very same day, on June 17, 1996, Rambus sent its withdrawal letter to JEDEC, attaching a list of all issued Rambus patents except the '327 patent (the only patent relevant to on-going JEDEC work. Richard Crisp, Letter (June 17, 1996) I 140022 **[Tab 48]**. At no time did Rambus inform JEDEC that it had an issued patent, or pending patent applications, containing claims covering dual edge clock or on-chip PLL/DLL technology.

Throughout the entire time of its involvement in JEDEC, Rambus never informed JEDEC that the technologies it had adopted or were considering for adoption into JEDEC standards – programmable CAS latency, programmable burst length, on-chip PLL/DLL and dual edge clock

– were the subject of Rambus's pending patent applications. As Richard Crisp testified:

> Q Did you ever stand up in JEDEC in the four years that you attended meetings and watch the SDRAM standardization, did you ever stand up and say, Stop doing this; I own it?
> A No, I never said that.
> Q You never told them that?
> A That's correct.

Trial Transcript, *Rambus, Inc. v. Infineon Technologies AG* (May 2, 2001) at 148:20 - 149:1 **[Tab 4]**.[15]

Indeed, documentary evidence demonstrates that Rambus followed a cold, calculated decision not to disclose its relevant patents or applications at JEDEC. When Chairman Gordon Kelley specifically asked Richard Crisp to state whether Rambus had patent rights relating to the SyncLink presentations at the May, 1995 JEDEC meeting, Crisp wrote to high level Rambus executives that "If it is not a really key issue . . . then I think it makes no sense to alert them to a potential problem they easily can work around . . . we may not want to make it easy for all to figure out what we have especially if nothing looks really strong." Richard Crisp. Email (May 24, 1995) R 155869 at R 155873-74 **[Tab 24]**; **********

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[15] Crisp also testified:

> Q You did not tell the people at JEDEC that what they were proposing for standardization infringed your patents at this meeting, did you?
> A That's correct.
> Q You just typed it into your computer and you talked about it back at Rambus, but you never told the folks at JEDEC?
> A That's also correct.

Id. at p. 210:18-25 **[Tab 4]**.

********** ********** **[Tab 49]**.

Even after leaving JEDEC, Rambus continued with its carefully orchestrated, strategic silence. As CEO Geoff Tate instructed employees: "do *NOT* tell customers/partners that we feel DDR may infringe [Rambus patents] – our leverage is better to wait." Geoff Tate, Email (February 2, 1997) R 200497 **[Tab 50]**.

Rambus's fraudulent scheme was not limited to misleading silence, however. Rambus did "speak" to address the scope of its intellectual property, albeit in a manner that served to mislead JEDEC and its members. For instance, at a JEDEC meeting in September 1993, Rambus disclosed the '703 patent to JEDEC even though Rambus knew that '703 did not relate to any work going on in the committee. *See* Trial Transcript, *Rambus, Inc. v. Infineon Technologies AG* (May 2, 2001) at 198:3-6 ("Q But you characterized [the '703 patent] at your deposition as being totally unrelated to JEDEC's SDRAM work, right? A I think I did, yes.") **[Tab 4]**. At the September 1995 JEDEC meeting, Richard Crisp was criticized for Rambus's failure to respond directly to Gordon Kelley's question as to whether Rambus had patent rights relating to the SyncLink presentations at JEDEC. Richard Crisp informed his superiors at Rambus that he defused the tension at JEDEC by "remind[ing] them that we have actually reported a patent to the committee in the past," thus implying that Rambus was complying with the JEDEC disclosure policy. Richard Crisp, Email (September 11, 1995) R 69511, 69676 at 69677 **[Tab 34]**. Rambus also disclosed a number of patents in June 1996 when it resigned from JEDEC. Notably absent from this list, however, was the '327 patent, which contained claims covering dual-edge clock and thus was Rambus's sole issued patent relevant to JEDEC's work, as well as any mention of specific patent applications containing claims covering JEDEC's work.

Richard Crisp, Letter to Ken McGhee (June 17, 1996) I 140022 at 140023 **[Tab 48]**. Together, Rambus's misleading communications and disclosures of irrelevant patents served to reinforce the impression it sought to make upon JEDEC's members: that Rambus did not have any patents or patent applications relevant to JEDEC's work.

After Rambus left JEDEC, it continued its efforts to add claims broading its patents, and to prosecute its pending patent applications, to ensure that it would obtain issued patents covering the JEDEC standards. See Response of Complaint Counsel to Rambus Inc.'s Oposition to Complaint Counsel's Motion to Compel (January 28, 2003) ("Complaint Counsel Response") at 6-14; Memorandum In Support of Complaint Counsel's Motion *In Limine* Regarding Rambus's Patent Prosecution Efforts After June 1996 and Neil Steinberg's Opinions Regarding the Scope of Rambus's Prior Patent Applications (March 26, 2003) ("Motion *In Limine*") at 4-10. Rambus intentionally continued to guard its secret concerning the scope of the claims in its patents and patent applications.[16] Rambus engaged in a program of document destruction in order to purge its files in preparation for litigation. *See* Complaint Counsel's Motion for Default Judgment Relating to Respondent Rambus Inc.'s Willful, Bad-Faith Destruction of Material Evidence (December 20, 2002); Order Granting Complaint Counsel's Motion for Collateral Estoppel, February 26, 2003 at 5 ("When 'Rambus instituted its document retention policy in 1998', it did so, 'in part, for the purpose of getting rid of documents that might be harmful in litigation'."). Only after JEDEC adopted the DDR SDRAM standard incorporating the technologies in question, and the industry became locked in to the use of those standards, did Rambus first assert its patents against the industry.

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[16] *See* Geoff Tate, Email (February 10, 1997) R 200497 ("do *NOT* tell customers/partners that we feel DDR may infringe [Rambus patents] – our leverage is better to wait.") **[Tab 50]**.

2. JEDEC Relied Upon Rambus's Misrepresentations in Developing Standards. In a fraud case, a plaintiff need show only that its reliance on a defendant's misrepresentations or omissions was "reasonable." *E.g.*, *Hitachi Credit America Corp. v. Signet Bank*, 166 F.3d 614, 629 (4th Cir. 1999); *Garrett v. Perry*, 346 P.2d 758, 760 (Cal. 1959).

JEDEC members relied on Rambus's omissions and misleading statements when they adopted the SDRAM and DDR SDRAM standards. The semiconductor industry requires investments of hundreds of millions, if not billions, of dollars, and lead times measured in years, to produce memory products. The entire industry depends on the good faith of all members of JEDEC to ensure that, when they plan to develop and manufacture a new memory architecture two or more years in the future, the JEDEC standard that they implement will be open and free of royalties. Dr. Oh, Senior Vice President responsible for all semiconductor operations at Hyundai (now Hynix) from 1997 to 1999, when Hyundai began work on its DDR SDRAM products, spoke for many in the industry when he testified:

> Q. . . . In July of 1997, did Hyundai believe that DDR SDRAM would be free of royalties, in other words, that no royalties would apply to DDR SDRAM? [Objection omitted.]
> THE WITNESS: If it were not, we will not get into this, developing this DDR.

Oh Tr. (1/8/03), p. 137:16-21 **[Tab 51]**. Within JEDEC, other members likewise relied on Rambus to disclose patents and patent applications relating to JEDEC's work. As members have explained, had Rambus disclosed its relevant patents and applications, JEDEC would have had the opportunity to design around Rambus's patent rights and create an open standard. see, e.g., Meyer Tr., *Rambus, Inc. v. Infineon Technologies AG*, (December 14, 2000) at 371-72 (had Rambus disclosed, JEDEC could have designed the SDRAM standard differently, dropped

features or modify features to avoid the Rambus patents) **[Tab 52]**; **********
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**********[Tab 53]**.

JEDEC members' reliance on Rambus to disclose any relevant patents or patent applications was fully reasonable in light of the detailed procedures that JEDEC followed to remind members of their disclosure obligations, Summary Decision Opp. at 58-94, as well as Rambus's statements and actions that affirmatively induced members to believe that Rambus was complying with those obligations. See *supra*.

3. JEDEC (and Consumers) Were Injured By Rambus's Conduct. The potential impact of Rambus's fraudulent scheme is staggering. **********
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[Tab 54]. **********
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********** **[Tab 55]**. **********
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********** **[Tab 56]**. While the latter estimates appear to be somewhat overly enthusiastic, they give some measure of the magnitude of economic harm that potentially could result from Rambus's conduct. The ultimate price, whatever it may be, will be paid by consumers.

B. Rambus's Attorneys Were Integral to the Success of Its Fraudulent Scheme.

Rambus's attorneys played a central role in Rambus's fraudulent scheme. As set forth in detail above, Rambus employed its attorneys — both in-house and outside — to complete its fraudulent plan by having them amend and litigate the patents Rambus held that covered the memory-chip standards promulgated by Rambus. *See also* Complaint Counsel's Motion to Compel Discovery Relating To Subject Matters As To Which Rambus's Privilege Claims Were Invalidated On Crime-Fraud Grounds And Subsequently Waived (January 7, 2003) ("Motion to Compel") at 13-21. The involvement of Rambus's attorneys continues through the present day. See Complaint Counsel Response at 6-14; Motion *In Limine* at 4-10. Because of Rambus's attorneys long-standing, direct and essential involvement in Rambus's fraudulent scheme, any privilege that might have attached to communications between Rambus and those attorneys or the work of those attorneys is invalidated, and the contents of such communications and work must be disclosed.

II. Rambus Waived Any Claims of Privilege by Voluntarily Producing Purportedly Privileged Document to Hynix

As explained in detail in previous briefs, Rambus voluntarily produced to Hynix, its adversary in on-going litigation, documentary evidence and transcripts of testimony regarding communications between Rambus representatives and attorneys and attorney work product relating to Rambus's participation in JEDEC, its efforts to broaden its patents to cover technologies involved in JEDEC work, and its plans to enforce its patents against companies producing JEDEC-compliant memory after the patents issued. Motion to Compel; Complaint Counsel Response. Judge Timony correctly found that Rambus's production of this material was voluntary. Order, February 28, 2003. As explained previously, Rambus's voluntary production

of these materials to its litigation opponent constitutes waiver of privilege with respect to the entire subject matter. Motion to Compel; Complaint Counsel Response. Also as set forth in detail in previous briefs, the subject matter is not arbitrarily limited to the time period when Rambus was a JEDEC member, since Rambus's efforts to broaden its patents to cover technologies incorporated in the JEDEC standards and to enforce those patents against the industry continue to the present. Complaint Counsel Response; *Motion In Limine*. Thus, Judge Timony's ruling also can properly be upheld on the ground that Rambus has waived any privilege that might have attached to attorney-client communications and attorney's documents relating to Rambus's efforts to broaden its patents to cover the technologies incorporated into the JEDEC standards and to enforce its patents resulting from those efforts.

For the reasons set forth above, Complaint Counsel respectfully requests that its Motion to Compel Discovery be granted.

Respectfully Submitted,

_____

M. Sean Royall
Geoffrey D. Oliver
Andrew J. Heimert

BUREAU OF COMPETITION
FEDERAL TRADE COMMISSION
WASHINGTON, D.C. 20580
(202) 326-3663
(202) 326-3496 (facsimile)

COUNSEL SUPPORTING THE COMPLAINT

Of Counsel:
Malcolm L. Catt
Robert P. Davis
Suzanne T. Michel
Jerome Swindell
John C. Weber
Cary E. Zuk

Dated: April 7, 2003

UNITED STATES OF AMERICA
BEFORE FEDERAL TRADE COMMISSION

Public Version

In the Matter of RAMBUS INCORPORATED, a corporation.	Docket No. 9302

PROPOSED ORDER

Upon Consideration of Complaint Counsel's Motion To Compel Discovery:

IT IS HEREBY ORDERED THAT Complaint Counsel's Motion is granted. Rambus's claims of attorney-client and work product privileges are invalidated, and Rambus may not assert such privileges to impede discovery, with respect to all efforts by Rambus, Inc. to broaden its patents or pending patent applications to cover matters pertaining to JEDEC standards, or to enforce its resulting patents against companies manufacturing or using products that conform to JEDEC standards, from December 1991 through the present.

_____
Stephen J. McGuire
Chief Administrative Law Judge

Dated: _____, 2003

Tabs not included in public version.

CERTIFICATE OF SERVICE

I, Brian Beall, hereby certify that on May 21, 2003, I caused a copy of the following materials:

1. Supplemental Memorandum In Support of Complaint Counsel's Motion to Compel Discovery Relating to Subject Matters as to Which Rambus's Privilege Claims Were Invalidated on Crime-Fraud Grounds and Subsequently Waived; and

2. [Proposed] Order,

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
Washington, DC 20580

and by electronic mail and overnight courier to:

A. Douglas Melamed, Esq.
Wilmer, Cutler & Pickering
2445 M Street, NW
Washington, DC 20037-1402

Steven M. Perry, Esq.
Munger, Tolles & Olson LLP
355 South Grand Avenue
35th Floor
Los Angeles, CA 90071

Counsel for Rambus Incorporated

_____

Brian Beall