CORRECTED

01-1449, -1583, -1604

IN THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

RAMBUS INC.,

Plaintiff-Appellant,

v.

INFINEON TECHNOLOGIES AG, INFINEON TECHNOLOGIES NORTH AMERICA CORP., and INFINEON TECHNOLOGIES HOLDING NORTH AMERICA CORP.,

Defendant-Appellees.

Appeals from the United States District Court
For the Eastern District of Virginia, Richmond Division, in Case
No. 3:00CV524, Judge Robert E. Payne

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- 1. The full name of every party represented by me is RAMBUS INC.
- 2. The name of the real party in interest represented by me is RAMBUS INC.
- 3. There is no parent corporation of RAMBUS INC. and no publicly held company owns 10 percent or more of the stock of RAMBUS INC.
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STATEMENT OF RELATED CASES

Pursuant to Federal Circuit Rule 47.5, Plaintiff-Appellant, Rambus Inc., submits that no other appeal in or from the same civil action in the lower court was previously before this or any other appellate court. This Court previously denied mandamus, based on an attorney-client privilege issue, sought by Rambus in this civil action. *See In re Rambus Inc.*, Misc. Docket No. 667, 2001 WL 392095 (Fed. Cir. Apr. 4, 2001) (Michel, Clevenger, Schall).

The issue of entry of a permanent injunction against Rambus is currently pending before the district court in this civil action.

Hynix Semiconductor Inc., et al. v. Rambus Inc., No. CV 00-20905, is currently pending in the Northern District of California, and Micron Technology, Inc. v. Rambus Inc., No. 00-792-RRM, is currently pending in Delaware. Both cases involve some of the same patents as those in suit here. Therefore, they may be directly affected by this Court's decision on claim construction in the pending appeal.

STATEMENT OF JURISDICTION

Pursuant to Federal Circuit Rule 28, the following information is provided: The statutory basis for the jurisdiction of the district court was 28 USC §1338(a).

The statutory basis for this Court to hear this appeal is 28 USC §1295(a)(1). This is an appeal from the Final Judgment entered by the district court on August 21, 2001, based in part on a claim construction ruling dated March 15, 2001.

STATEMENT OF THE ISSUES

- 1. Whether the district court improperly narrowed claim terms "integrated circuit device," "read request" (and related "write request" and "transaction request"), and "bus," and thus erroneously granted judgment of noninfringement.
- 2. Whether the district court erred in denying JMOL on the fraud count where there was insufficient evidence that (a) Rambus had any pending patent applications that it had a duty to disclose or that, in any event, (b) Infineon made the necessary direct inquiries to Rambus as required both to prove reasonable reliance and to make Infineon's counterclaim timely.
- 3. Whether the district court erred in denying a new trial on the fraud claim where (a) the court's rejection of a proposed instruction under *Kingsdown Medical Consultants v. Hollister*, 863 F.2d 867 (Fed. Cir. 1988), allowed the jury to find fraud based solely on Rambus's practice of amending its pending patent claims to cover competing products, and (b) the jury's assessment of Infineon's proof was infected by the erroneous claim construction.
- 4. Whether the district court, in awarding more than \$7 million in attorneys' fees and costs, erroneously deemed this an "exceptional case" under 35 USC §285, where Rambus's proposed claim constructions were, at a minimum, reasonable.

INTRODUCTION

In 1989, two distinguished electrical engineering and computer science professors, Drs. Michael Farmwald and Mark Horowitz, invented revolutionary new computer memory technology. They filed a lengthy and detailed patent application in 1990 and founded Rambus, Inc. ("Rambus") to license various aspects of that technology to computer memory manufacturers. One such manufacturer was Siemens and its successor Infineon, to which Rambus made extensive confidential disclosures beginning in 1990. Infineon had the following reactions to Rambus and its technology:

- "Quite revolutionary." JA2693.
- "An innovative, well thought out concept that reaches far into the future." JA11760.
- "One day all computers will be built this way, but hopefully without the royalties going to Rambus." JA6526.
- "Deadly menace to the established computer industry"; one proposed alternative: "[m]ake it public domain—join SYNC DRAM!!!"

 JA6530.1
- "[Someone should] buy Rambus and dump it" (JA6530), meaning "bury the technology." JA2693.

One type of Random Access Memory (RAM) is "dynamic" RAM, or DRAM. The type of memory chip at issue here is a subclass of DRAM involving synchronization with a clock—"SYNC DRAM" or "SDRAM," a Synchronous Dynamic Random Access Memory. Infineon recognized that aspects of Rambus's memory technology would be useful in SDRAM development: "it has become clear that a Rambus memory can easily be converted into a SDRAM." JA9054.

During 1990 and 1991, the Rambus inventors set out to meet with the world's major memory manufacturers to explain their innovations. The inventors' business model was not to manufacture through their own company but to continue developing novel technology, patent it, and license it to memory manufacturers. License fees and royalties were to be their only revenue. JA2099-100.

In December 1991, Rambus first attended an industry standard-setting body called the Joint Electron Devices Engineering Council ("JEDEC"), which was dominated by the industry's major memory manufacturers and whose meetings were in no way secret. While attending JEDEC from late 1991 to 1995, Rambus learned that technologies that Farmwald and Horowitz invented and disclosed in their 1990 patent application were being incorporated into a new memory standard JEDEC was writing, called "SDRAM." Rambus increased its efforts in the PTO to present claims that would capture all the inventions supported in Rambus's 1990 application.

Only after leaving JEDEC, however, did Rambus in fact file claims—which issued in 1999 and afterward—covering its fundamental advances applicable to the SDRAMs. Most memory chip manufacturers have licensed and paid royalties for the right to practice Rambus patents, including those at issue here. Three memory manufacturers—Infineon, Hynix, and Micron—opted to litigate with Rambus.

This appeal arises from the first of the cases, involving Infineon. In this case, the district court committed fundamental errors leading to the mistaken rejection of Rambus's infringement claim and, indeed, to an unsupported and fatally infected imposition of fraud liability on Rambus for nondisclosures while participating in JEDEC. Those errors should be corrected. Otherwise, the

mistaken patent rulings will deprive a small, remarkably innovative young company of the fruits of its inventions. Likewise, if the fraud judgment stands, it will deter participation in standards-setting proceedings by exposing companies, especially small innovators, to serious risks of devastating state-law judgments for doing what federal law protects, *i.e.*, securing patent coverage for one's inventions.

STATEMENT OF THE CASE

A. Factual Background.

1. Background of the Technology.

In 1988, Dr. Farmwald saw a rapidly approaching problem: microprocessors were rapidly getting faster, but the commonly used *memory* chips, Dynamic Random Access Memory ("DRAMs"), were not keeping up. JA2033. In late 1989, Dr. Farmwald began working with Dr. Mark Horowitz, a Stanford University electrical engineering professor and an expert circuit designer, to close this looming "performance gap." JA2028. They invented a number of separate ways of improving memory data transfer rates. Taken together, the innovations would allow DRAMs to operate at unheard-of speeds—over ten times faster than conventional DRAMs. JA2034-35.

On April 18, 1990, Rambus filed its first patent application, Ser. No. 07/510,898 ("the '898 application"). JA495. That application disclosed the fundamental Rambus inventions of programmable latency, variable block size, double data rate ("DDR") operation, and on-chip delay locked loop. Even before filing the application, and in the following months, Rambus began executing on its business plan by disclosing its technology under appropriate non-disclosure agreements to the major memory companies in the industry, including patent-

savvy companies such as IBM (October 1989), Toshiba (April 1990), Siemens (February 1990), Texas Instruments (October 1990), and Samsung (October 1991). JA2119-20, 2162.

On April 16, 1991, Rambus filed an international patent application under the Patent Cooperation Treaty (the "WIPO Application"). JA12037. Rambus's WIPO Application, which contains the description and details of the inventions claimed in the patents-in-suit, became public on October 31, 1991.

In June 2000, Toshiba became the first DRAM company to sign a patent license (which included the patents-in-suit) to use Rambus's inventions in the manufacture of SDRAMs and DDR SDRAMs. Oki, Hitachi, NEC, Samsung, Elpida and Mitsubishi have all also taken licenses for SDRAM and DDR SDRAMs.

2. **JEDEC Standard Setting.**

Rambus attended its first JEDEC meeting on December 4, 1991 as a guest, and formally joined on February 27, 1992. JA8500 and 10031. JEDEC adopted its SDRAM standard in early 1993, announcing it formally on March 4, 1993. JA3891-94. Rambus disclosed to JEDEC its '703 patent on September 23, 1993, shortly after the patent issued. JA8730. Rambus attended its last JEDEC meeting on December 6, 1995, and confirmed its withdrawal by letter on June 17, 1996. JA8594 and JA6616.

JEDEC meetings were open to the public, with the minutes, deliberations and proposed standards also all public.² JA3394, 3398. While at JEDEC,

A non-public meeting of certain JEDEC memory manufacturing members occurred on October 24, 1991, just as JEDEC was formulating its proposed SDRAM standard—and just before one manufacturer invited Rambus to attend

Rambus never proposed, promoted, or voted in favor of the adoption of any technology, including its own. JA4108-4109. Out of dozens of SDRAM ballots between 1992 and 1993, Rambus voted on the proposed SDRAM standard only once, on July 21, 1992, when it cast ballots *against* four proposals, including proposals related to programmable burst length and a programmable latency feature. JA8648-54. Rambus never lobbied for the adoption of a standard. Rambus made no affirmative statements about the potential overlap between its technology and JEDEC. JA4121-22.

3. Prosecution History of the Patents-In-Suit.

United States Patents 5,953,263 ('263 patent), 5,954,804 ('804 patent), 6,032,214 ('214 patent), and 6,034,918 ('918 patent) (collectively, the "patents-insuit" and appended hereto beginning at JA233, 263, 294, and 324, respectively), are assigned to Rambus by Drs. Farmwald and Horowitz.³ The patents-in-suit all descend from the '898 application. All have substantially identical specifications and involve various ways of improving the interface between DRAMs and computer microprocessors (or other controllers).

The '898 application contained 150 claims. In the first office action, the PTO recognized that the application contained at least *eleven* independent and

JEDEC. That meeting was chastised by JEDEC in its minutes dated December 4-5, 1991, noting antitrust, fair notice, and other issues. JA8501.

The asserted claims are:

^{&#}x27;263 patent: claims 1-5, 14, 16-19, 21, 23-25, 27-28, 30, 32-33 (JA260);

^{&#}x27;918 patent: claims 1-2, 6, 8-9, 18-20, 24-25, 29-31, 33 and 34 (JA352);

^{&#}x27;214 patent: claims 1-2, 4, 6, 9-11, 14-16, 18-19, 21, 24-26 and 29 (JA321); and

^{&#}x27;804 patent: claim 26 (JA293).

distinct inventions (JA680) and therefore required restriction. As a result, and through the usual process of reviewing the claims on file, Rambus filed numerous divisional and continuation applications claiming priority from the '898 patent.

The applications that are now the patents-in-suit were all filed between February 1997 and February 1999, after Rambus left JEDEC. The earliest patent-in-suit to issue was in September 1999. Thus, all of the claims at issue were filed after Rambus stopped attending JEDEC meetings, while the written description, a substantially identical version of the 1990 application, existed before Rambus attended a single JEDEC meeting.

B. Procedural Background.

On August 8, 2000, Rambus sued Infineon for infringement of two patents ('263 and '804) in the Eastern District of Virginia. Rambus added charges of infringement of two additional patents ('214 and '918) on October 20, 2000. In response, Infineon filed a state-law counterclaim for fraud and a RICO claim.

A claim construction hearing was held on February 26-28, 2001. On March 15, 2001, the district court issued its *Markman* opinion, significantly limiting the scope of Rambus's patent claims. JA23. Early in the trial, the court entered JMOL on most of Rambus's claims.⁴

During trial, as Rambus presented its remaining, greatly-truncated infringement case, the court announced a clarification of its *Markman* ruling.

JA463. This clarification was a further, drastic limit on the scope of Rambus's claims. Infineon promptly moved for JMOL of no infringement on the claims still

JMOL was granted on claim 26 of the '804 patent, all asserted claims of the '263 patent except 1 and 2, all asserted claims of the '918 patent except 18, and all asserted claims of the '214 patent. JA483.

left,⁵ and the court granted its motion. JA476. At the close of Rambus's case-inchief, Infineon voluntarily dropped its claim of monopolization under the Sherman Act, 15 USC §2. JA4408, ll. 1-8. The remaining antitrust counterclaim (attempt to monopolize) was dismissed when, at the close of Infineon's case-in-chief on its counterclaims, the district court granted Rambus's motion for JMOL. JA478.

Throughout trial, Infineon told and suggested to the jury that Rambus stole ideas from JEDEC and amended its claims to cover those ideas. Both in its opening and in its closing, Infineon emphasized repeatedly its theory that Rambus's claim-changing activity at the PTO was wrongful, introducing ideas that were not Rambus's at all. JA4799. For example:

- "If they invented it, it would have been in the patent in the first place. But they didn't. They stole it. They stole it from the industry standards bodies." JA1893;
- "They go to...meetings, they see the presentations,...[t]hey go meet with their patent lawyer, they start amending the claims;" JA4803;
- "The next thing you know, they are meeting with the patent lawyer changing their claims to include that feature in their patent." JA4807;
- "Well, then why on earth did you wait until you watched it at JEDEC before you put it in your patent claims?" JA4811;
- "Over and over and over again. They watch and they file. They watch and they file." JA4821;
- "Did Rambus attend standards bodies meetings and change their patents to cover what they saw at the standards meeting? You can't reach any other conclusion." JA4822;

⁵ Claims 1 and 2 of the '263 patent and claim 18 of the '918 patent.

- "secretly manipulating their patent applications" JA4795;
- "Rambus intentionally changed these claims after watching the SDRAM standardization." JA4997; and
- "[JEDEC's] sole reason for being was corrupted repeatedly, year after year after year, by Rambus, by their failure to follow the rules, their knowing and intentionally modifying their patent applications to cover that standards work." JA4999.

Rambus requested an instruction under *Kingsdown Medical Devices v. Hollister*, 863 F.2d 867 (Fed. Cir. 1988), that, as the district court recognized, would have made clear to the jury that it could not find Rambus's amending activity wrongful. The trial court twice refused to give the instruction, instead proposing a modification that—as the court thought proper—would have expressly invited the jury to find Rambus guilty of theft, or otherwise find the amendments wrongful in-and-of themselves. JA11692.

The jury found that Rambus committed actual and constructive fraud based on nondisclosures respecting the SDRAM standard at JEDEC (and respecting a separate standard, called DDR SDRAM). The jury awarded nominal damages of \$1.00 on the fraud claims as well as punitive damages, which under Virginia statute were automatically reduced to \$350,000. JA19.

On post-trial motions, the district court granted JMOL for Rambus with respect to the DDR SDRAM, because Rambus had resigned from JEDEC before that standard was proposed. JA204. The court also granted JMOL respecting constructive fraud, holding it unavailable for nondisclosure under state law. JA155. The court let the SDRAM actual fraud verdict stand, however, and then awarded \$7,123,989.52 in attorneys' fees, costs and expenses. JA100. The issue of injunctive relief is pending before the district court.

On August 21, 2001, the district court certified its orders and judgments as final and entered judgment as to the fraud and attorneys' fees issues pursuant to Fed. R. Civ. P. 54(b). JA458. This appeal timely followed. JA11750.

SUMMARY OF ARGUMENT

- A. The district court erred in its construction of claims terms "integrated circuit device," "read request" (and related "write" and "transaction" request), and "bus." With respect to "integrated circuit device," the court ignored controlling precedent of this Court. With respect to "read request," the court read additional unclaimed functions into the term and misread the specification. With respect to "bus," the court ignored the undisputed ordinary meaning of the term and misunderstood the impact of the PTO's eleven-way restriction requirement of Rambus's original 1990 application. As a result, the court ignored important intrinsic evidence, including the original claims and the prosecution history that were central to the proper interpretation of the term "bus" and erroneously imported limitations from the specification into unambiguous claims.
- B. The district court erred in denying several JMOL motions on the fraud claim. First, the jury could not properly find that Rambus breached a duty to disclose. Second, the jury could not properly find that Infineon reasonably relied on any nondisclosure by Rambus, because Infineon failed to make the full inquiry required in the circumstances. That conclusion, finally, also renders Infineon's counterclaim untimely—the jury could not properly find the due diligence that is a key to Infineon's only answer to Rambus's statute of limitations defense.
- C. A new trial on fraud is required if JMOL is denied. First, the district court, by refusing to give Rambus's proposed *Kingsdown*-based instruction, allowed the jury to adopt Infineon's argument that Rambus acted improperly by

amending its pending applications. Permitting the jury to so find was improper, because no evidence or law was presented on this federal-law issue. The prejudice inherent in the court's ruling denying the requested instruction, *i.e.*, the critical importance of the "wrongful-amendment" argument to Infineon's case, was confirmed by the district court, which stated that giving the requested instruction would amount to "directing a verdict in this case." JA4765. With the jury likely influenced in its verdict by a misunderstanding of what conduct of Rambus it could deem wrongful, Rambus is entitled to a new trial. Second, a new trial on fraud is independently required if this Court rejects the district court's claim constructions, which infected the jury's assessment of key elements of the fraud verdict.

D. Based on erroneous reasoning, the district court concluded that this was an "exceptional case" and awarded Infineon attorneys' fees and costs. Such an award is unprecedented and fails as a matter of law.

STANDARDS OF REVIEW

A. Claim Construction.

Claim interpretation raises an issue of law subject to *de novo* review. *Cybor Corp. v. FAS Techs.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc).

B. Denial Of JMOL.

This Court reviews a denial of JMOL following a jury verdict *de novo*, applying the same standard as the lower court. *SIBIA Neurosciences v. Cadus Pharm.*, 225 F.3d 1349, 1354 (Fed. Cir. 2000). JMOL is required "if the jury's factual findings are not supported by substantial evidence or if the legal conclusions drawn from the jury's findings cannot as a matter of law be supported by those findings." *Baxter Int'l v. McGaw*, 149 F.3d 1321, 1332 (Fed. Cir. 1998).

Substantial evidence exists only if "a reasonable jury, given the record before it viewed as a whole, could have arrived at the conclusion it did." *Dawn Equip. v. Kentucky Farms*, 140 F.3d 1009, 1014 (Fed. Cir. 1998).

C. New Trial.

A new trial is required if the jury may have relied on an impermissible basis in reaching its verdict. *Litton Systems v. Honeywell*, 238 F.3d 1376, 1381 (Fed. Cir. 2001). Questions of law, such as whether the district court applied the proper legal standards and correctly instructed the jury, are reviewed *de novo. See, e.g.*, *Church v. Attorney Gen.*, 125 F.3d 210, 215 n.5 (4th Cir. 1997).

D. Attorneys' Fees And Costs Under §285.

Section 285 authorizes an award of attorneys' fees only in exceptional cases. 35 USC §285. An exceptional case must be established by clear and convincing evidence. *Advance Transformer v. Levinson*, 837 F.2d 1081, 1085 (Fed. Cir. 1988). Underlying factual findings are reviewed under the clearly erroneous standard and legal conclusions are reviewed *de novo*. *Molins PLC v. Textron*, 48 F.3d 1172, 1186 (Fed. Cir. 1995).

ARGUMENT

I. THE DISTRICT COURT ERRED IN CLAIM CONSTRUCTION LEADING TO DISMISSAL OF RAMBUS'S INFRINGEMENT CLAIMS.

A. The Court Erroneously Construed "Integrated Circuit Device."

The district court erred in holding that the term "integrated circuit device" in asserted Claim 26 of the '804 patent must include "a device identification register" and "comparison circuitry." Infineon acknowledged that "integrated

circuit device" has an ordinary meaning—a "circuit constructed on a single monolithic substrate, commonly called a 'chip"—in *all* patent claims except claim 26. JA92. The district court found nothing in the claims or specification that gives any different meaning to the term. JA92. The court based its construction entirely on certain attorney "remarks" in the prosecution history of the '804 patent (JA93), but that reliance was in error.

The remarks followed a PTO rejection of certain claims on the ground that they claimed an "identification register" disclosed in the Weymouth patent. JA82. In response, applicant submitted new claims 186-211. Of those new claims, 186-210 continued to feature "a register for *storing an identification value*." *See* file history at JA1164. However, new claim 211 (now claim 26 of the '804 patent) did not include any register for that purpose. JA293. The prosecuting attorney submitted the following "remarks" directed to reasons these new claims distinguish over Weymouth.

These newly submitted claims are directed to a memory device (or an integrated circuit having memory) having (1) an internal register for storing an identification value . . . and (3) comparison circuitry to determine whether the identification information corresponds to the identification value. . . .

JA93; JA1174-75.

These remarks cannot fairly be read to apply to new claim 211. Claim 211 included *neither* the "internal register for storing an identification value" limitation that had raised prior art issues with respect to Weymouth, *nor* the "comparison circuitry" limitation mentioned in the attorney remarks addressing the prior art. In context, therefore, these attorney remarks cannot effect a disclaimer of the otherwise-unambiguous meaning of the claim term at issue.

That conclusion is not just common sense but a matter of precedent. In *Intervet America v. Kee-Vet Labs*, 887 F.2d 1050 (Fed. Cir. 1989), the attorney accompanied claim amendments with the erroneous remark that "the claims are restricted to a single vaccination scheme." The trial court relied on the attorney remark to limit a claim not containing the limitation, but this Court reversed, stating:

When it comes to the question of which should control, an erroneous remark by an attorney in the course of prosecution of an application or the claims of the patent as finally worded and issued by the Patent and Trademark Office as an official grant, we think the law allows for no choice. The claims themselves control.

Id. at 1054.6

That holding squarely controls. Here, as in *Intervet*, the limitations emphasized in the remarks were *not present* in application claim 211. Moreover, here, as in *Intervet*, the examiner's own subsequent amendments to claim 211 and other claims (JA1203-07) establish that the examiner had read the claims and "knew what claims he was allowing." *Id.* The plain meaning of "integrated circuit device" must therefore govern.

Although overlooking *Intervet*, the district court relied on *Hockerson-Halberstadt v. Avia Group Int'l*, 222 F.3d 951 (Fed. Cir. 2000), but without noticing that *Hockerson* expressly distinguished *Intervet* on grounds that also distinguish this case from *Hockerson*. In *Hockerson*, unlike this case and *Intervet*, the intrinsic evidence provided no notice to the public to contradict the meaning suggested by the attorney's erroneous remarks. 222 F.3d at 957; see also Biotec Biologische Naturverpackungen GmbH v. Biocorp, 249 F.3d 1341 (Fed. Cir. 2001) (following *Intervet*).

- B. The Court Erroneously Construed "Read Request," "Write Request," and "Transaction Request."
 - 1. The court misread the claims, requiring that they incorporate the functions of a working device.

The district court also erred in construing the term "read request" too narrowly. The court held that the request must include "a series of bits . . . that contain *multiplexed address* and control *information needed to request a read of data from a memory device*." JA84 (emphasis added).⁷ That construction, based on extrinsic evidence, is wrong under the controlling intrinsic evidence.

The court's errors rested on misleading extrinsic evidence from Infineon's expert (JA71-73), including his testimony on "the way the invention works." JA73. From this, the court concluded that a "read request" must also "require" a response and therefore itself must *include* "both address and control information" necessary to enable a memory device to respond. JA73. The court even went so far as to fault Rambus for not explaining "how the device would respond without receiving address, data and control information..." JA83.

The court's focus on an operational device, rather than particular claim language, is legal error. Patents simply are not required to include in their claims every function and component necessary to enable successful operation of a complete device:

The court jointly considered the closely related terms "write request" and "transaction request" (JA69), and the court's analysis and constructions of those other terms are similarly erroneous for the reasons given herein with respect to "read request." Hence, those errors – although included in this appeal – are not the subject of separate analysis.

the district court erred by importing the functions of a working device into these specific claims, rather than reading the claims for their meaning independent of any working embodiment. . . . A claim need not claim every function of a working device. Rather, a claim may specify improvements in one function without claiming the entire machine with its many functions.

Rodime PLC v. Seagate Technology, 174 F.3d 1294, 1303 (Fed. Cir. 1999); see Carl Zeiss Stiftung v. Renishaw PLC, 945 F.2d 1173, 1181 (Fed. Cir. 1991). See also Interactive Gift Express v. Compuserve, 256 F.3d 1323, 1342 (Fed. Cir. 2001) (term "authorization code" need only authorize copying; improper to construe the term to include limitations regarding "its origin or destination").

2. The court misread the specification, overlooking the disclosed meaning of "read request."

The specification provided no support for the district court's demand that the "read request" itself enable a response. The court cited three passages, but two do not even mention the term "request." JA74 (quoting '918 patent, Col. 3, lines 35-39, col. 4, lines 9-11). Those passages, addressing how an overall device may function, do not aid an understanding of what a "read request" is, contains, or does.

The court's third specification citation also does not mention a "read request" and uses the word "request" only as part of a different phrase. It indicates that a "bus transaction" is initiated "by sending a request packet (a sequence of bytes comprising address and control information)" to one or more slave (e.g., memory) devices. Despite the court's confusion (JA80), the patent specifications never use "read request" and "request packet" interchangeably – not even "sometimes" (cf. JA83).

The specification teaches that a "read request" differs from "request packet:" a "read request" is merely one component of a "request packet." Specifically, the "read request" consists of 4 digital "bits," called the AccessType field, which are contained within the larger "request packet," as shown in Fig. 4. The court overlooked or misread these instructive passages:

[As] shown in Fig. 4, a request packet 22 contains 6 bytes of data – 4.5 address bytes and 1.5 control bytes 8

The first byte contains two 4 bit fields containing control information, Access Type [0:3], an op code (operation code) which, for example, specifies the type of access 9

The AccessType field specifies whether the requested operation is a read or a write and the type of access, for example, whether it is to the control registers or other parts of the device, such as memory. In a preferred implementation, AccessType [0] is a Read/Write switch: if it is a 1, then the operation calls for a read; if it is a 0, the operation calls for a write

JA345. Thus, a "read request" (and, correspondingly, a "write request") is determined by and consists of the AccessType field, 4 digital bits of control information contained within the "request packet." The first bit determines whether the operation requested is to be a "read" or a "write," while the remaining

The '918 patent at col. 6, lines 61-62, JA343, defines "request packet" as "a sequence of bytes comprising address and control information." *See also* JA344, Col. 8, ll. 60-62. In computer parlance, a "byte" equals eight digital "bits" of data. (In Fig. 4 a ninth bit, the "Addrvalid" bit, is included.)

The notation "[0:3]" signifies a series of 4 digital bits, denominated 0, 1, 2, and 3. Thus [0] means the "first bit," and [0:3] means "bits 0 through 3." JA345.

3 bits determine the type of read or write operation. ¹⁰ The specification and drawings unambiguously distinguish—and certainly do not equate—the two terms "read request" and "request packet." This is directly contrary to the district court's conclusion.

The district court also relied on a February 1999 prosecution statement that "the identification information [is] contained in the transaction requests." (emphasis by the district court). JA82, JA1175. But the Examiner's response powerfully confirms the error in the court's inference from the statement. At the time it was made, application claim 186 referred to "a transaction request including identification information." JA1165. Critically, however, that claim language was subsequently changed by the Examiner, who made his own amendment by inserting the word "packet" after each occurrence of "request" in claim 186 (now claim 1 of the '804 patent) (JA1204),—thus clarifying that the identification information is in a "request packet" rather than in a "request." The district court, missing that change, misread the prosecution history, which shows that identification information—like address information—is not part of the "read request." Indeed, independent patent claims 15 and 23 of the '804 patent confirm the point by reciting "identification information and a read request" separately as different limitations. JA292.

For example, JA346, col. 11, lines 20-32 (including the table) explains how the 3 remaining bits of the AccessType field may be coded to identify the type of access. The table shows that when the three bits designated by the "[1:3]" notation have a decimal value of 6 or 7, access to a "normal DRAM" *i.e.*, a memory device, is specified (a "read request" with value of "6" is represented digitally by the 4 bit sequence "1110").

3. The court incorporated, without explanation or support, a multiplexing limitation into "read request."

Having erroneously concluded that "read request" must include address information necessary for *a response* to the request (JA71-74), the district court compounded its error by mistakenly concluding, without any explanation or analysis, that the address and control information must be "*multiplexed*." JA83-84.¹¹ Such a construction clearly contradicts the language of the claims that neither explicitly nor implicitly refer to multiplexing.

C. The Court Erroneously Construed The Term "Bus."

The district court initially concluded that the claim term "bus" means "a multiplexed set of signal lines used to transmit address, data and control information." The court—in the middle of trial—later clarified the term to mean "triple multiplexed set of signal lines...." Both conclusions were legal error. "Bus" is a technical term that has an undisputed ordinary meaning in the art. The district court misunderstood the intrinsic evidence, which in no way redefines the term "bus." That misunderstanding rests fundamentally on the court's failure to appreciate that Rambus's original application included a host of separate inventions—only some, but not all, of which include a multiplexed bus—causing the PTO to issue an 11-way restriction requirement against the original '898 application. The patents-in-suit claim other of those inventions—not the

The court may have assumed that a "read request" must be multiplexed merely because it is transmitted over "bus" lines, which the court had decreed to be "multiplexed." However, some of the asserted claims do not even mention a "bus." (See, e.g., '263 patent, claims 1 and 2). JA260.

multiplexed bus—and "bus" thus retains its ordinary meaning in the asserted claims.

1. The court ignored the undisputed ordinary meaning of "bus," which does not require multiplexing.

There is a "heavy presumption in favor" of according terms in claims their "ordinary meaning." *Johnson Worldwide Assocs. v. Zebco*, 175 F.3d 985, 989 (Fed. Cir. 1999). All four patents-in-suit identify the "field of the invention" as "an integrated circuit *bus interface* for computer and video systems." JA341 (Col. 1, lines 19-20). Within that field, "bus" has an undisputed, ordinary meaning ¹²:

A set of signal lines used by an interface system, to which a number of devices are connected, and over which information is transferred between the devices.

THE NEW IEEE STANDARD DICTIONARY OF ELECTRICAL AND ELECTRONIC TERMS at 141 (5th ed. 1993) and 116 (4th ed. 1988). JA487. That meaning plainly does not require multiplexing over the lines.

The district court refused to recognize the ordinary meaning of the term "bus," even as a starting point for its analysis, disdaining technical dictionary and treatise evidence of the term's ordinary meaning as mere "extrinsic evidence." JA37-38. But this Court has emphatically approved use of such neutral texts to determine the ordinary meaning of a claim term as the "starting point" of claim construction. *Dow Chemical v. Sumitomo Chemical*, 257 F.3d 1364, 1372, 1373 (Fed. Cir. 2001). The district court, having skipped the crucial <u>first step</u> of claim

¹² See, e.g., JA5698-5700 (testimony of Mr. McAlexander). Regardless of the precise field within the electrical industry, no accepted definition of "bus" includes the concept of "multiplexing."

construction, then mistakenly approached the other intrinsic evidence without understanding that it needed to find affirmative reason *to depart from* that meaning.

2. The court failed to recognize that the patent specification disclosed numerous independent inventions, many requiring only an ordinary bus, as established by the original claims and the PTO's restriction requirement.

The district court fundamentally missed a simple point: only one of the many inventions disclosed in the original '898 application was a new bus that can greatly enhance the performance of computer memory devices. That new kind of bus is thus <u>not</u> a limitation in all of Rambus's claims. Both the written description and original claims expressly describe that "new" or "inventive" bus by using certain key phrases to distinguish it from ordinary, non-multiplexed buses. Those key phrases are not present when the inventors described, and originally claimed, *other* inventions not dependent on the special "new bus."

The district court evidently failed to recognize the critical point of patent law: applications can and often do contain multiple independent inventions. 13 The statute provides expressly for that common circumstance. 35 USC §121. Here the PTO, quoting the statutory language, immediately recognized that there were "independent and distinct" inventions disclosed in that '898 application and thus required restriction into 11 (and later more) separate claim groupings. JA682-87.

The original claims directed to the inventors' "new bus" expressly defined it

Where, as here, a potential applicant may be unsure of whether it has more than one invention to patent, the PTO initially prefers all inventions in a *single* application. *In re Berg*, 140 F.3d 1428, 1435 (Fed. Cir. 1998).

by these key phrases:

- (1) said bus including "a plurality of bus lines for carrying substantially all address, data and control information needed by said memory [or 'semiconductor'] devices;"
- (2) said bus "containing substantially fewer bus lines than the number of bits in a single address;" and
- (3) said bus "carrying device-select information without the need for separate device-select lines connected directly to individual memory [or 'semiconductor'] devices."

Together, those phrases defined the "new bus" as a bus that operates in a *multiplexed* fashion. Original independent claims 1, 13, 25, 46, 56, 68, 82, 95, 97, 106, 108, 111, 114, 116, 118, 124 and 135 each contained these *limitations*, which the inventors found necessary to describe their "bus of the invention." JA568-629.

The PTO's restriction requirement, under Section 121, resulted in moving the new bus into certain applications that matured into certain Rambus patents *not* at issue here. *Other* claims, directed to each of the other inventions *not* dependent on the "new bus," moved into other applications (divisional and later continuation applications). But, because the specification of each of those divisional applications is required to be the same as the original application, the written descriptions of each of these continue to describe the "new bus" *even though the* "new bus" may not be part of any claim of a particular divisional application (and is not part of the claims here in suit).

The district court did not appreciate the effect of the restriction – which required Rambus (under the "law of consonance") to refrain from seeking claims to the "new bus" in the divisional applications claiming *other* inventions. *Gerber Garment Tech. v. Lectra Sys.*, 916 F.2d 683, 685-86 (Fed. Cir. 1990); *see* R.

Harmon, PATENTS AND THE FEDERAL CIRCUIT at 912 (5th ed. 2001). The court expressed disbelief that Rambus could not identify any claims to the "new bus" in the patents-in-suit. JA5532-33. However, this disbelief underscored the court's error. The court failed to recognize the presence of "new bus" claims in the original application (with the key defining phrases) and their eventual movement, through normal restriction practice, into patents other than the patents-in-suit. JA56-57.

The district court then compounded its error. Opining that "oftentimes complex and voluminous patent histories" were not helpful in claim construction, the court held that "it would be impermissible" to rely on claims now in "other patents" in construing the claims of the patents-in-suit. JA61. As a result, the court erroneously disregarded the original application—including the original claims—which, in toto, is part of the PTO prosecution record and thus important intrinsic evidence that must be taken into account in construing claims. Pall Corp. v. PTI Techs., 259 F.3d 1383, 1391(Fed. Cir. 2001); Elkay Mfg. v. EBCO Mfg., 192 F.3d 973, 978 (Fed. Cir. 1999) ("the prosecution history gives insight into what the applicant originally claimed as the invention"); Abtox v. Exitron Corp., 122 F.3d 1019, 1027 (Fed. Cir.), modified on reh'g, 131 F.3d 1009 (Fed. Cir. 1997) (the prosecution history relevant to continuation applications also includes the parent application).

The district court's erroneous approach is implicit in its repeated emphasis on determining the meaning of "the bus of the invention" rather than "bus" as used in the asserted claims:

The specification clearly and unambiguously describes the bus of the invention to be the inventive multiplexed bus. JA41.

[Infineon's expert explains] in every instance when they describe the bus of the invention it is always a multiplexed address, data and control bus. [Citation omitted.] Rambus's expert did not refute this conclusion. JA44.

Only by ignoring the presence of multiple independent inventions in the original application could the court make the logical leap it did, *i.e.*, jumping from the conclusion that the "bus of the invention" has multiplexing, to the conclusion that any "bus" mentioned in the claims must have multiplexing as well. The ordinary meaning of "bus" standing alone is to the contrary, and that meaning is confirmed by the use of key additional modifying phrases when the new bus was claimed.

3. The inventors did not redefine "bus" in their specification.

Contrary to the court's mistaken belief, the inventors did not act as "lexicographers" and define the term "bus" differently from its ordinary meaning. When they described the new bus, they used the key phrases noted above, but they never used those phrases to describe ordinary buses. *See. e.g.*, JA342 (col. 3, ll. 50-60) (opening paragraph of the Summary of Invention of each patent, quoted by the court at JA41-42, which includes each of the key phrases needed to describe the new bus). Construed properly and in light of the prosecution history, there is no language in the patents-in-suit that supports the notion of a redefinition of the word "bus." 14 *Cf. Dow Chemical*, 257 F.3d at 1376 (patent did not "sufficiently redefine" the ordinary meaning of a claim term "such that one of ordinary skill in

That Rambus's specification "distinguish[es] *prior art buses* with dedicated and point-to-point lines from the *multiplexed bus of the Rambus invention*" (JA49-50) in no way supports the district court's notion that "bus" is redefined in the specification to mean "multiplexed bus." *IMS Technology v. Haas Automation*, 206 F.3d at 1422, 1434 (Fed. Cir. 2000) (statements regarding the prior art do not clearly disclaim an ordinary meaning of "data block").

the art would believe that" the term has now taken on a new meaning); *IMS*, 206 F.3d at 1433 (nothing in written description or prosecution history clearly indicates that patentee gave a specialized meaning to "data block" that overcame its ordinary meaning). Indeed, the district court acknowledged two different usages of "bus" in the specification (JA52, n.15) but failed to recognize the reference it quoted as further evidence that the inventors had *not* changed the meaning of the word "bus."

4. Because the ordinary "bus" is *not* an "invention" of the asserted patents, the patents did not need to describe or enable it.

The district court's repeated observations that "every embodiment described in the specification involves a multiplexed bus," the specification fails to describe any other kind of bus in connection with the invention, and it is "the only system described and enabled in the specification" (JA43, 45, 46) do not support the court's construction. A patent specification need not describe what is well known, *i.e.*, prior art buses; it need *only* describe the bus "invention" and how that bus works with the new devices. *Spectra-Physics v. Coherent*, 827 F.2d 1524 (Fed. Cir. 1987); *Paperless Accounting v. Bay Area Rapid Transit Sys.*, 804 F.2d 659, 664 (Fed. Cir. 1986); *Hybritech v. Monoclonal Antibodies*, 802 F.2d 1367, 1384 (Fed. Cir. 1986). Because *ordinary* buses were well known to those skilled in the art, no narrowing inference can be drawn from failure to describe or "enable" ordinary buses, because that was unnecessary. Rambus's only obligation under \$112 was to describe the "new bus," which it did, and enable those skilled in the art to use it, both alone and in conjunction with Rambus's other new inventions, which Rambus did.

In sum, the court's construction of "bus," like its construction of the "request" terms and "integrated circuit device," was erroneous, and requires reversal of the JMOL of noninfringement.

II. THE DISTRICT COURT ERRED IN DENYING JMOL ON THE FRAUD CLAIM.

A. The Jury Could Not Reasonably Find That Rambus Failed To Disclose Anything It Had A Duty to Disclose.

Infineon failed to prove by the required clear and convincing evidence that Rambus breached any alleged disclosure obligation imposed by its participation in JEDEC. The contours of the disclosure obligation were murky at best, with Infineon relying in the end on testimony about vaguely defined expectations, rather than precise written policies giving clear guidance in an obviously sensitive area (a meeting of direct competitors centrally concerned about innovations as a key driver of competition). The brief written policy did not refer to patent applications before 1993, 15 and even thereafter did not pinpoint what applications

Prior to October 1993, JEDEC's written standard governing patent disclosures referred only to "patent." JA7620. That is the form of the disclosure rule as shown to JEDEC members and used (at the beginning of JEDEC meetings and on JEDEC ballots) throughout Rambus's term at JEDEC. See, e.g., JA8500-8805. There were, during Rambus's membership in JEDEC, two other formulations of this written policy. At one point, in the JEDEC meeting on December 1992, there was a policy entitled "draft" shown to JEDEC members that extended the meaning of "patents" to include "patent applications." Later, on October 1993, the written standard for patent disclosure was changed to expressly include patent applications, but that new written version was only included in the JEDEC committee chairperson's manual. JA7590. JEDEC's disclosures to its members remained the same, retaining only the reference to "patents" through the end of 1995.

have to be disclosed or how they were to be disclosed; and it was agreed by Infineon's witnesses below that even the unwritten duty they alleged did not reach *intentions* (or relevant foreign patents). JA3399; see also ITT Hartford Group v. Virginia Financial Assoc., 520 S.E.2d 355, 361 (Va. 1999) (fraud "must relate to a present or pre-existing fact," not future intentions); Parker-Smith v. STO Corp., 551 S.E.2d 615, 619 (Va. 2001). What is clear, though, is that whatever the duty of disclosure, Infineon did not prove that Rambus breached it.

What was disclosed to JEDEC included both Rambus's first patent, the '703 patent (September 1993) and Rambus's WIPO application (public in October 1991), both of which contain the specification on which all of Rambus's later patents were based. Upon departing from JEDEC in 1996, Rambus also disclosed a longer list of patents it had recently been issued (still not the patents-in-suit). What could not have been disclosed before Rambus left JEDEC in 1996 were the applications for the patents-in-suit, because those applications and claims did not exist until later. Infineon's nondisclosure claim, therefore, rests entirely on the asserted existence of some undisclosed SDRAM-related applications Rambus had before leaving JEDEC.

But Infineon could not and did not prove, by expert testimony or otherwise, that any claim in an undisclosed application covered the SDRAM standard. Nor did any such claims implicate JEDEC's concern about standardizing technology without a licensing commitment from its owner. This remarkable absence of proof should have compelled a ruling that Infineon's proof of fraud was insufficient. In

Rambus inadvertently omitted one patent from that list—issued between the preparation of the draft and the final version of the withdrawal letter—and in any event all of Rambus's patents were easily discovered by the simplest possible computer search of patents with Rambus as assignee.

fact, not a single undisclosed Rambus patent application actually triggered any duty of disclosure.

The district court's JMOL opinion does no better than Infineon did at trial. This opinion also fails to identify any Rambus applications having claims that covered the SDRAM standard so that disclosure was required. The court identified certain Rambus patents and applications having claims "intentionally designed to cover the technology under consideration by JEDEC." JA170-71. However, a review of the claims cited by the court shows that none related to the SDRAM standard (so as to threaten the JEDEC process).

The district court pointed to U.S. Patent No. 5,319,755 and Application No. 07/954,945 as relevant to the burst length feature included in the standard. JA171. But those applications claimed the multiplexed bus and device identifier features that are not part of the SDRAM standard. *See, e.g.*, JA6978. And, indeed, at trial Infineon admitted that the '755 patent was not relevant to the SDRAM standard. JA4837 and JA6616.

The district court pointed to Application No. 847,961 as pertaining to CAS latency. But that application's claims were limited to the "device identifier" feature that is not part the SDRAM standard. See, e.g., prosecution claims 151 et. seq. at JA6692.

The district court thought that patent No. 5,606,717 and its parent application (No. 847,651) also related to CAS latency. Here again, the court overlooked the fact that the '717 patent claims require the multiplexed bus that is not part of the SDRAM standard. JA9534.

The district court asserted that Rambus's application No. 847,692 related to PLL technology. The SDRAM standard, however, does not use PLL technology. JA2396.

Finally, the district court said that Rambus's patent No. 5,473,575 and application No. 847,532 contain claims directed to an externally-supplied reference voltage. But the '575 patent is directed to a device having voltage swings of *less than one* volt. JA9290. The voltage swing specified by JEDEC is 3.3 volts, making this patent likewise inapplicable to SDRAMs following JEDEC's standard. Notably, Infineon expressly admitted that the '575 patent was not relevant to the JEDEC SDRAM standard. JA4837 and JA6616.

In short, in every case, no builder of an SDRAM under the JEDEC standard would need a license under any of the patents and applications relied on by the court. Given that fact, it is obviously irrelevant, under the all-elements rule for infringement, whether some pending claims may have included as individual *elements* features considered by JEDEC for inclusion in the standard. And given that (1) the actual applications did not read on SDRAM and (2) the legal irrelevance of mere intentions, it is likewise insufficient whether internal Rambus emails and documents suggested that some people in Rambus mistakenly *believed* that they had pending SDRAM patent claims existed or that Rambus *intended* to file such claims. Rambus was entitled to JMOL based on the absence of the required proof that it breached any duty to disclose.

B. The Jury Could Not Reasonably Find Reasonable Reliance By Infineon Or, For Similar Reasons, The Due Diligence Required By The Statute of Limitations Defense.

1. No reasonable reliance.

Virginia law requires a fraud plaintiff to prove reasonable (justifiable) reliance on the alleged misrepresentation or omission. *Bank of Montreal v. Signet Bank*, 193 F.3d 818, 827 (4th Cir. 1999); *Metrocall of Delaware v. Continental*

Cellular Corp., 437 S.E.2d 189, 193-94 (Va. 1993). The required proof is not present when a plaintiff, with reason to inquire, stops at a partial inquiry when a readily available fuller inquiry would reveal more. See Bank of Montreal, 193 F.3d at 827-28; Harris v. Dunham, 127 S.E.2d 65, 70-71 (Va. 1962); Watson v. Avon Street Bus Center, 311 S.E.2d 795, 798-99 (Va. 1984); Williams v. Dresser, 120 F.3d 1163, 1171-72 (11th Cir. 1997). Contrary to the district court's ruling, Infineon's proof was insufficient as a matter of law.

A duty of direct, clear-cut inquiry was triggered by what Infineon knew and what it suspected. As to the former, Infineon knew Rambus was in the business of creating, protecting, and licensing intellectual property. Infineon also knew (or certainly should have known) all that was disclosed by Rambus. The disclosures included the '703 patent, thus revealing the original application common to all patents at issue (and, later, a number of other then-pending applications), as well as the 1991-published WIPO application. JA183, 175, 177, 219. Moreover, although the district court discounted knowledge of the '755 patent, issued in January 1994 (JA177), that patent was readily discoverable by Infineon through a quick and inexpensive "assignment search."

As to what Infineon suspected, the district court noted that Infineon had "concerns about Rambus's patent rights." JA183. In 1992, Infineon's JEDEC representative, Mr. Meyer, concluded that SDRAM was a "public domain version" of a Rambus memory. JA6534. That same year, Infineon documents indicate Infineon considered that some SDRAM features "may fall under Rambus patents."

^{17 &}quot;Passive acceptance" of contradictory information does not constitute justifiable reliance. *See Foremost Guaranty Corp. v. Meritor Savings Bank*, 910 F.2d 118, 124-25 (4th Cir. 1990); *Maine v. Leonard*, 365 F. Supp. 1277, 1285 (W.D.Va. 1973) (failure to confront directly).

JA6532. By 1993, Infineon was aware of the WIPO application and Rambus's '703 patent, the prosecution history of which showed the 11-way restriction indicating to any patent lawyer that many inventions were present in the application. In August 1994, Infineon's representative, Meyer, correlated Rambus's '703 patent to SDRAMs and suspected that Rambus's pending applications were "diverse." JA6525. What is more, as late as 1997, the JEDEC committee discussed, at meetings where Infineon was present, both Rambus's patents and Rambus's position that it was *not* complying with the JEDEC policy regarding patent disclosures. JA7513.

In these circumstances, reliance by Infineon on Rambus's "silence," if any, was unjustifiable, and was replaced by a duty to confront Rambus directly. Infineon had deep-seated, long-standing suspicions that Rambus could have claims to SDRAMs. These suspicions, coupled with Infineon's knowledge of Rambus's application disclosures, made it unreasonable for Infineon to do less than inquire *directly* of Rambus either to confirm or to deny its suspicions. Yet Infineon did not do so.

Infineon indirectly made a *partial* investigation, arranging for a vague request for "comment" through JEDEC Committee Chairman Gordon Kelley to Rambus about its patent portfolio. JA183, JA11890. According to Infineon's Meyer, the Rambus representative responded by indicating he did not wish to make a comment. *Id.* But that event only confirms the suspicion on Infineon's part, and the vague and oblique question cannot fulfill the duty of direct inquiry so as to justify reliance. Similarly, Meyer's testimony that he read and "was misled" by the disclosure of Rambus's '703 patent, testimony that the district court cited as evidence of reliance (JA184), instead shows partial investigation and an *absence* of reliance on representation by Rambus. Indeed, these are precisely the kinds of

partial investigation that *negate* any claim of reasonable reliance on the representation or omission: a plaintiff who makes his own investigation is held to rely on its results, *and* the results of the complete investigation he *should have* made, *not* on the representation. *See* cases cited *supra* at pp. 29-30.

Other evidence from Infineon itself confirms its lack of justifiable reliance on Rambus's "silence" in light of Rambus's disclosures. Infineon's Meyer was a party to JEDEC member discussions that some of what was in Rambus's patent disclosures was barred by prior art. JA6613. The very fact of those discussions confirms that JEDEC members fully understood that *additional claims* might be sought beyond those already filed or issued; that was the point of the discussions. Those discussions thus further shifted the responsibility to Infineon to conduct its own *full* investigation.¹⁸

Even a simple assignment search for Rambus patents and examination of Rambus's available prosecution histories should have forewarned Infineon (and undoubtedly did) that a dozen or more pending applications devoted to "diverse" aspects of the original '898 application likely existed. ¹⁹ Even more starkly, Infineon could and should have simply asked Rambus about its patents and applications. *See Maine*, 365 F. Supp. at 1285. That such a *direct* inquiry would

To the extent that Infineon took Rambus's silence in May 1992 to mean that Rambus would not have SDRAM patents at any *future* time, any such reliance was unjustified as a matter of law. Statements as to future events do not qualify as misrepresentation. *See* Virginia cases cited at pp. 29-30.

It is not material that Infineon could not determine the *exact* scope of Rambus's pending claims, *see Williams*, 120 F.3d at 1172-73; mere evidence of the *likelihood* of numerous additional patents would reveal the "possibility" of fraud and thereby negate any reliance on Rambus's "silence." *Brumbaugh v. Princeton Partners*, 985 F.2d 157, 162 (4th Cir. 1993).

not have been fruitless is shown by the candid testimony of Committee Chair Gordon Kelley. Kelley testified that Rambus's JEDEC representative, on two occasions in mid-1992 and in 1994, in response to direct questions by Kelley, expressly told him, "yes," Rambus held patents "applicable to" specific technology before the committee. JA1552-53 (pp. 46-48, 51). Having made a "partial" investigation, Infineon was legally bound by all it might have discovered from a full investigation, including a "simple inquiry" directly to Rambus. *Harris*, 127 S.E.2d at 70-71. Given Infineon's knowledge of the Rambus application disclosures that supported eventual SDRAM claims, and its heightened sensitivity to SDRAM claims that might issue to Rambus, Infineon's purported reliance on mere "silence" is unreasonable as a matter of law. *Metrocall*, 437 S.E.2d at 194; *Williams*, 120 F.3d at 1172.

2. Barred by the statute of limitations.

The district court—recognizing the interrelation of the reliance issue and the limitations issue by relying on the same evidence in analyzing both (JA218-219, citing same evidence)—also erred in denying JMOL to Rambus on its limitations defense. Va. Code §8.01-243. The statute begins to run when the alleged fraud reasonably should have been discovered through the exercise of due diligence. *Id.* §8.01-249; JA218. For all the reasons just discussed, Infineon "should have discovered" the alleged fraud prior to 1999, and its claim is time-barred as a matter of law, requiring JMOL on this ground too. *Brumbaugh*, 985 F.2d at 162; Maine, 365 F. Supp. at 1285-86. The district court erred in denying a new trial on fraud.

III. THE DISTRICT COURT ERRED IN DENYING A NEW TRIAL ON FRAUD.

The foregoing argument shows the insufficiency of evidence on crucial issues as a matter of law. Even if a reasonable jury *could* find against Rambus on those issues, however, the findings in this case cannot stand. *This* jury's findings were thoroughly infected by two fundamental errors – one independent of the claim constructions, one dependent on them – requiring a new trial at a minimum.

A. A New Trial Is Required On Fraud Because The Jury Was Allowed To Rest Liability On An Impermissible Basis.

Following *Kingsdown*, Rambus requested a jury instruction making clear that Rambus's pursuit of amendments in the PTO could not be condemned as fraudulent. The district court refused the requested instruction, proposing a modification that would have directed the jury to consider the wrongfulness of the amending process. Because any such consideration was improper in this case, the instruction ruling erroneously left the jury free to accept Infineon's pervasive invitation to base its fraud verdict on conduct of Rambus that was plainly lawful under federal patent law—*i.e.*, amending patent claims to cover inventions supported by Rambus's disclosures. That ruling was plainly prejudicial, requiring a new trial.

1. Infineon's two theories of fraud: Rambus's failure to disclose pending patent applications, and Rambus's changes in its pending patent applications.

From opening statement through closing argument, Infineon pressed on the jury two fundamentally separate and distinct theories of wrongdoing. First, Infineon argued and sought to prove that Rambus acted fraudulently during

December 1991-December 1995 by not disclosing its pending patent applications to JEDEC.²⁰ Second, building on what was undisputed—*i.e.*, that Rambus changed its pending patent claims based on discussions at public JEDEC meetings—Infineon argued that Rambus's amendments were themselves wrongful acts. In Infineon's view, Rambus used "manipulation and trickery" (JA1967) to introduce new claims to "intentionally and purposely cover the standard" being developed at JEDEC (JA1985).²¹

These two theories were fundamentally different. Under the former "nondisclosure" theory, the lawfulness of the amendment was irrelevant; it was the failure to disclose pending applications that was the gravamen of this argument. By contrast, Rambus's claim amendments based on discussions at JEDEC meetings were the crux of the latter argument. After trial, both the district court

Critically, the disclosure duty found by the district court clearly went beyond anything in the earlier standard setting cases, which involved promotion of standards, not mere silence regarding applications. See, e.g., Potter Instrument Co., Inc. v. Storage Tech. Corp., 207 USPQ 763, 766 (E.D. Va. 1980) (concluding that where the patentee "actively participated" in the adoption of its technology as an industry standard, but "intentionally failed to bring its... patent to the [standard setting] committee's attention," the patentee was estopped from bringing an infringement action on its patent); aff'd on other grounds, 641 F.2d 190 (4th Cir. 1981); Stambler v. Diebold, 11 USPQ2d 1709, 1715 (E.D.N.Y. 1988); Wang Laboratories, v. Mitsubishi Electronics American, 29 USPQ2d 1481 (C.D. Cal. 1993) (that patentee successfully promoted its technology into JEDEC standards without revealing its then-pending application states equitable defense that supports denial of preliminary injunction); In re Dell Computer, 121 FTC 616 (1996) (failure to disclose known patents that, in fact, covered the standard).

Infineon's opening statement pervasively characterized that undisputed fact as wrongful. See JA1976-77, 1979, 1981-1987, 1988-1993; id. at 1989 ("manipulate their claims, stretch and pull the RDRAM patent applications"); id. at 1993 ("manipulate"; "They stole it.").

and Infineon expressly recognized that these were distinctly "different issues." JA8820; JA224 ("the propriety of filing amendments under the patent laws is a separate inquiry from the fraud claim"); JA120 n.7.22

Until late in the case, Infineon had pending a challenge to the Rambus claims at issue as unsupported in the written description. Infineon dropped any written-description challenge, however, when the district court observed that Infineon failed to introduce evidence of lack of support in the original 1990 application. JA4075. Accordingly, Infineon expressly limited its requested liability instructions to the wrongful-nondisclosure theory, and the court's instructions presented only that theory. JA11717 (knowing and intentional failure to disclose; intent to mislead).

Given Infineon's opening argument and trial presentation, Rambus sought an instruction to focus the jury on the alleged nondisclosure and prevent it from deeming the claim-amending process wrongful. The instruction was all but a direct quote from *Kingsdown*'s recognition of the lawfulness of amending to capture others' products (as long as there is sufficient support in the specification). 863 F.2d at 874.²³ The district court rejected that request, and indeed listed

It is not improper to amend or add patent claims intended to cover a competitor's product about which the applicant has learned during the prosecution of the patent application,

The record is undisputed that JEDEC meetings were in no sense secret. JA3394, JA3398 (the meetings were open; and anyone present could disseminate what was happening publicly); *accord* JA1558, pp. 70-71. The Rambus patents at issue in this case were not applied for until 1997 and 1998, basically five years after the SDRAM standard was published by JEDEC. Consequently, any suggestion that Rambus's amendments depended on some secret knowledge gained from JEDEC participation is utterly baseless.

The proposed instruction stated:

Rambus's amendment of its claims as part of Rambus's fraudulent conduct. JA162, JA4765, 4766.

Infineon's counsel then devoted approximately half of his closing argument to painting Rambus's amendments as wrongful. Rambus immediately renewed its request for the *Kingsdown* instruction to ensure that the jury did not base its verdict—including the critical and vigorously contested issue of *scienter*—on the improper ground of the amendments. JA4858-59; JA11690. The district court, recognizing the message of Infineon's closing, entertained the request, but it rejected the instruction on its merits, proposing a modification which read:

After a patent application is filed, its claim may be amended or added to so long as the amended or added claim is disclosed in the original patent application and so long as the amended or added claims are not based on information obtained by engaging in wrongful conduct.

JA11692. This instruction invited the jury to consider whether Rambus "amend[ed] [its] applications using information [it] obtained from somebody else." JA4862. Rambus was left with no choice but to decline the instruction.

2. The district court, by refusing the requested Kingsdown instruction, erroneously and prejudicially allowed liability based on condemning the application changes as wrongful.

Although a district court has discretion in formulating the jury instructions, in the end "[i]t is the inescapable duty of the trial judge to instruct the jurors, fully and correctly, on the applicable law of the case, and to guide, direct, and assist

including a continuation or divisional patent application, provided that the claims are supported by the original patent application.

them toward an intelligent understanding of the legal and factual issues involved in their search for truth." 9A Charles A. Wright & Arthur R. Miller, FEDERAL PRACTICE AND PROCEDURE, §2556, at 438 (1995) (footnote omitted). "The function of the appellate court . . . is to satisfy itself that the instructions show no tendency to confuse or mislead the jury with respect to the applicable principles of law." Id. §2558, at 456 (footnote omitted). This calls for a "practical" approach to determine "whether the instructions, construed as a whole, and in light of the whole record, adequately informed the jury of the controlling legal principles without misleading or confusing the jury to the prejudice of the... [other] party." Spell v. McDaniel, 824 F.2d 1380, 1395 (4th Cir. 1987). Accordingly, "an appellate court must . . . vacate a jury verdict and remand for a new trial if a jury may have relied on an impermissible basis in reaching its verdict." Litton Sys., 238 F.3d at 1381.24

In particular, instructions must make the relevant legal issues clear to the jury in the context of the specific case. "As against a more general or abstract charge, a party is entitled to a specific instruction on its theory of the case" Wright & Miller, §2556, at 444 (footnote omitted). Thus, if issues no longer in the case, or the evidence or arguments of counsel on such issues, could confuse the jury under the originally proposed instructions, a further clarifying instruction may be required. See, e.g., Vaughn v. Willis, 853 F.2d 1372, 1376 (7th Cir. 1988); Arthur S. Langenderfer v. S.E. Johnson, 917 F.2d 1413, 1440 (6th Cir. 1991). As

See also Bammerlin v. Navistar Int'l Transp. Corp., 30 F.3d 989, 901 (7th Cir. 1994) (by failing to give a clarifying instruction, "the district judge left the jury adrift and permitted it to return a verdict on a basis that may have been legally and factually flawed"); Kelber v. Joint Industry Bd., 27 F.3d 42, 46-47 (2d Cir. 1994).

the district court here recognized (JA220-21), omissions from a jury charge can be error if, in the circumstances, the omission rendered the given instructions "incorrect or incomplete" and the requested instruction "could have cured the error." *Biodex Corp. v. Loredan Biomedical*, 946 F.2d 850, 854 (Fed. Cir. 1991).

Under this standard, the district court erred in declining to give the requested *Kingsdown* instruction. The court did not—and could not—say that the requested instruction was legally incorrect under the established *Kingsdown* rule; on the contrary, it conceded that the proposed charge was "in the abstract . . . a correct statement of law." JA4766. The court accepted, as it had to, that the issue of unlawful amendment had played a central role in Infineon's evidence and argument to persuade the jury that Rambus had acted wrongfully. Indeed, the court twice recognized that giving the proposed instruction, thus ensuring that the jury was not misled or confused with respect to the issue of amended applications, would effectively amount to a directed verdict for Rambus on the fraud count in light of Infineon's remaining evidence and theory of fraudulent nondisclosure submitted to the jury in the court's actual charge. JA4765-66.

Nevertheless, the court refused the proposed instruction. The court did so, and proposed its modification, on the ground that the jury *should* be allowed to conclude that Rambus, in amending its claims, had taken the ideas of others that it learned of at JEDEC, and amended its patent applications to claim those ideas.

JA4862-63.25 But it was precisely that reason which was error *in this case*. The dispositive point is that Rambus's claim amendments, which sought

In its post-trial rulings, the district court reiterated the basis for its instruction ruling, namely, that the jury was allowed to consider whether the claim amendments took ideas from JEDEC unsupported in the 1990 application. *See* JA223, JA227, JA120, JA123.

(unsuccessfully) to cover expected developments in the marketplace based on discussions at JEDEC, were all supported by the original 1990 patent application; even more specifically, *this* jury could not be allowed to conclude otherwise. There was no evidence of "wrongful conduct" that supported the district court's proposed modification, nor did Infineon present any evidence that Rambus's amended claims lacked §112 support in the 1990 application or that Rambus had derived any of the concepts disclosed in the 1990 specification from JEDEC or its members. Therefore, Infineon withdrew its written-description contention.

As a result, the district court had no basis whatsoever for allowing the jury in this case to speculate that Rambus had taken from JEDEC any of the ideas it incorporated into its claim amendments. If the amended claims were adequately supported, then as a matter of federal law the jury could not properly have drawn any conclusion that Rambus's amendments took ideas (which, if any, were public) from JEDEC (which, in any event, was a public forum). *See, e.g., TurboCare Division v. General Elec.*, 264 F.3d 1111, 1118 (Fed. Cir. 2001); *Union Oil Co. v. Atlantic Richfield*, 208 F.3d 989, 997-98 (Fed. Cir. 2000); *see also* 35 U.S.C. §102(f). Accordingly, the district court's instructions, and its refusal to give Rambus's requested *Kingsdown* instruction, constituted error.

Nor can there be any doubt that this error was not harmless and therefore requires a new trial. *See Kotteakos v. United States*, 328 U.S. 750, 764-65 (1946) (error requires reversal unless this Court's conviction is clear "that the error did not influence the jury, or had but very slight effect," so that the Court could "say, with fair assurance, after pondering all that happened without stripping the erroneous action from the whole, that the judgment was not substantially swayed by the error"). *See also* 11 Charles A. Wright, Arthur R. Miller, & Mary K. Kane, *FEDERAL PRACTICE AND PROCEDURE* §2883, at 446-47 (1995)(*Kotteakos* harmless-

error test applies equally in civil and criminal cases). As explained above, the requested instruction went to a central issue on fraud and sought to prevent the jury from being misled or confused by the repeated argument that Infineon presented throughout the trial about Rambus's amendments to its pending patent applications. A significant error in the instructions in this regard could hardly be harmless in the circumstances of this case. *See Sasaki v. Class*, 92 F.3d 232, 237 (4th Cir. 1996) (new trial required where, because no instruction corrected counsel's invitation to the jury to rely on impermissible theory, "we cannot conclude with any assurance that the error was harmless"). Indeed, the district court dispositively confirmed the prejudice when it twice recognized that giving the requested instruction would "effectively direct" a verdict for Rambus.

The error thus requires a new trial on fraud so that the fraud issues are assessed uncorrupted by a condemnation of Rambus's PTO activities as wrongful. In addition, as already demonstrated, the evidence in this case on several crucial issues was, at the very best for Infineon, "sharply divided," and the jury could easily have found for Rambus. Particularly in these circumstances, the district court's *Kingsdown* error was not harmless. *See Bammerlin*, 30 F.3d at 901.

B. The Fraud Verdict Was Infected By The Erroneous Claim Constructions.

The fraud verdict must also independently be set aside, and the case remanded for a new trial on fraud, if the Court reverses enough of the district court's claim constructions to require vacating of the judgment of noninfringement. These claim constructions by the district court fatally infected the jury's determinations on at least two closely related aspects of the fraud verdict

- the reasonable-reliance and timely-suit issues discussed above.²⁶ The infection by the erroneous claim constructions is clear from an examination of the two stated arguments on which Infineon relied in persuading the jury that it made all required inquiries about Rambus's patent interests.

To begin with, even under the erroneous claim constructions, reasonable reliance was tough for Infineon to show. Infineon was aware that Rambus was not a manufacturer, but was entirely in the business of creating intellectual property, securing protection for it, and licensing it: patents were the heart of Rambus's assets. Infineon was keenly concerned that Rambus *might* have intellectual-property interests in SDRAM technology, leading it arrange with Chairman Kelley, at the May 7, 1992 meeting, to ask Rambus representative Richard Crisp the oddly oblique question about whether he wanted to comment on the SDRAM proposal with respect to JEDEC's patent policy – to which Crisp silently shook his head. JA183; JA2767. In September 1993, Infineon possessed the '703 patent and had or should have had the 1991 public WIPO application. JA175.

The district court, in denying JMOL and a new trial, made clear that it was at best a close question whether Infineon had sufficient evidence of reasonable reliance: the court stated that the jury could reasonably have resolved the issue in Rambus's favor (defeating Infineon's fraud claim). JA184. The district court nevertheless found Infineon's claim of reasonable reliance sufficiently supported on precisely two bases. The first was Meyer's assertion that Richard Crisp's shake of his head at the May 1992 meeting and his silence at the same meeting when the WIPO application was brought up, addressed what previously was a clear concern

The first issue is an element of fraud on which Infineon had the burden of proof by clear and convincing evidence. The second issue is a defense on which Rambus had the burden of proof.

that Rambus might have, or be trying to obtain, patents relating to the SDRAM standard under consideration at JEDEC. The second was Meyer's assertion that the '703 patent actually and reasonably led him to believe that Rambus's technology "related only to RDRAMs" (*i.e.*, was limited to multiplexed buses), not SDRAMs. JA183-84.²⁷ *See also* JA219 (citing same two bases for Infineon's conclusion).

To find reasonable reliance, the jury had to find that those two bases justified Infineon's refusal to take the simple additional step of putting a direct inquiry to Rambus, with which it had a continuing relationship, asking whether Rambus was pursuing any patent applications that might cover SDRAM technology. Rambus's response, even if it had been a refusal to give a direct answer, would have told Infineon whether it could actually and reasonably rely on the absence of any such prospective infringement problem. Infineon took no such simple step during the several years following JEDEC's initial adoption of the SDRAM standard in 1993 before Infineon itself began making SDRAM products.

The evidence for reasonable reliance, even if legally sufficient, was exceptionally thin, given the ease of making direct inquiry and the other evidence that Infineon did *not* actually have its concerns allayed, let alone solidly and reasonably put to rest, by the fall of 1993. Crisp's silence and head-shake was at best a weak basis for inferring either reliance in fact or the reasonableness of any such reliance. In fact, after the May 7, 1992, JEDEC meeting – which was specifically about SDRAMs – Meyer's trip report (of May 15, 1992) stated that he

The district court also referred to Meyer documents in 1993 referring to SDRAM technology as "public domain," but the only bases that could make such an assertion reasonable are the two noted in text: the Crisp May 1992 silence; and the '703 patent.

was still concerned about Rambus's patent situation and referred to "filed but pending" Rambus patent applications. JA6516. After the September 1993 disclosure of the '703 patent, in August 1994, Meyer wrote a memorandum that connected Rambus's '703 patent with SDRAMs and suggested Meyer's concern that Rambus might have other patents to come ("Rambus–US?,???,???"), raising "diverse" issues. JA6525. On September 11, 1995, Rambus presented a letter at the JEDEC committee meeting pointedly stating: "our presence or silence at committee meetings does not constitute an endorsement of any proposal under the committee's consideration nor does it make any statement regarding potential infringement of Rambus's intellectual property." JA9115. (Emphasis added). Then, on June 17, 1996, Rambus sent a letter withdrawing from JEDEC and specifically referring to the patent policy as the reason: while Rambus would continue to license its intellectual property, the "terms may not be consistent with the terms set by standards bodies, including JEDEC." JA6616.

Against this background, the jury's assessment of Infineon's claim of reasonable reliance had to be strongly—if not completely—influenced by its view of the second basis (aside from Rambus's silence) cited by the district court, namely, that Meyer did and reasonably could conclude that the '703 specification so clearly failed to support SDRAM claims that no further inquiry of Rambus was called for.

Even standing alone, this second basis for Infineon's claim of reasonable reliance could easily have been rejected by the jury. After all, participants in technology markets where patents are common know that applications are routinely kept confidential by applicants, so a company might well have pending but undisclosed applications. Such participants know, too, that a patent applicant, having filed an application containing a plethora of inventions, is very likely to be

filing amendments and continuation applicants as it works through the familiar process of writing claims to capture all the inventions supported by the original application. *See*, *e.g.*, *Union Oil Co.*, 208 F.3d at 991 (numerous amendments common); *Exxon v. Phillips Petroleum.*, 2001 U.S. App. LEXIS 20638, at *2-*3 (Fed. Cir. Sept. 20, 2001) (continuing applications common). A firm worried about potential infringement must presume that all claims that might reasonably be supported by the specification are being pursued, especially where the patent applicant/holder at issue is, like Rambus, entirely in the intellectual property business. The issue of what potential claims the '703 specification *could* reasonably support, therefore, became critical to assessing Infineon's highly implausible claim of reasonable reliance.

On that issue, however, the jury's determination must have depended directly on the faulty claim construction that the district court adopted. That faulty claim construction involves the same specification as the '703 patent, and as Infineon stressed to the jury in its closing (JA4799, JA4815; *see also* JA4792, JA5014 (judge's instructions)), that faulty construction meant as a matter of law that Rambus's patent did not cover SDRAM technology. Indeed, the district court's claim-construction opinion made clear the court's view that the specification could not support a contrary construction. Had the jury understood that the claims actually *do* cover SDRAM technology, or even that the specification *could reasonably* support such claims, its entire picture of whether Infineon actually and reasonably relied would be sharply altered. It would have been far more likely for the jury to reject Infineon's assertions of actual and reasonable reliance, despite Infineon's failure to make the readily available direct inquiry to Rambus regarding the existence of any relevant Rambus patents. The

district court's claim-construction errors thus propagated into the fraud verdict, which must be set aside for retrial without that infection.

The jury's statute-of-limitations determination was similarly infected by the erroneous claim constructions. As noted above, the limitations issue, like the reasonable reliance issue, turns on whether Infineon made diligent inquiry. The district court relied on the same evidence for both issues. Particularly because the jury could reasonably find that Infineon, a continuing member of JEDEC, had or could be attributed knowledge of Rambus's September 1995 and June 1996 letters to JEDEC, the infection of the bases for finding reasonable reliance extends to the statute-of-limitations determination as well. Rambus is entitled to have the jury presented with a proper understanding of its patents in determining whether Infineon acted with reasonable diligence in discovering Rambus's patent interests.

IV. THE AWARD OF ATTORNEYS' FEES AND COSTS SHOULD BE SET ASIDE.

A. The Award Of Attorneys' Fees And Costs Under §285, Under The Circumstances Here, Is Unprecedented And Erroneous.

The district court's finding that this was an "exceptional case," and its subsequent award of \$7,123,989.52 in attorneys' fees and expenses under §285 were predicated primarily²⁸ on its conclusion that Rambus's patent infringement suit was frivolous, and in turn on the court's conclusion that Rambus's claim constructions and theory of infringement were "directly at odds with the intrinsic

As shown by Infineon's fee and expense chart (JA8807), followed by the district court to the penny (except for Slater and Matsil and expert witness amounts), the pre- and post-*Markman* "patent" issues account for \$4,004,790.89 of the total award.

evidence" of the patents-in-suit. JA115. An award on such a basis is unprecedented and should fail as a matter of law.

Indeed, Rambus relied on legally defensible positions in support of its claim construction. *See, supra*, Section I. That the district court disagreed with Rambus's claim construction arguments did not justify a finding that Rambus's claim construction was baseless or its infringement case frivolous. *See, e.g., Hayes Int'l v. Jessop Steel*, 8 F.3d 1573, 1580 (Fed. Cir. 1993) (reversing an award of attorneys' fees pursuant to section 285 because the patentee "had a reasonable chance" of proving infringement based on interpretation of the claim); *United States Surgical Corp. v. Orris*, 47 F. Supp. 2d 1270, 1271 (D. Kan. 1999); *Baxa Corp. v. McGaw*, 996 F. Supp. 1044, 1054 (D. Col. 1997) (that claim interpretation is a legal matter "does not make the process at arriving at a claim construction any more predictable to the litigants"), *aff'd*, 185 F.3d 883 (Fed. Cir. 1999).

Affirmance of the fee award based on this record would open the floodgates to awards under §285 in any claim construction dispute whenever the trial court (rightly or wrongly) disagreed with one of the litigants. The district court's award is erroneous and should be reversed.

B. The Award Of Attorneys' Fees On The Fraud Claim Should Not Stand.

If the fraud verdict falls or a new trial is required, the fee award should be set aside. Far from reflecting flagrant disregard of known duties, this is a case in which even the basic duty alleged indisputably goes beyond anything in prior precedents and in which there was at best a jury question on the proper elements of fraud liability. Accordingly, the award in the amount of \$2,382,782.67 based on the fraud claim should be set aside.

CONCLUSION

For the above reasons, the district court erred in its claim construction and in failing to grant JMOL in favor of Rambus, and in failing to grant a new trial to Rambus under Rule 59. The judgment of the district court dismissing Rambus's patent infringement claims, finding fraud by Rambus and awarding damages and attorneys' fees under §285 should be vacated and the case remanded for proceedings not inconsistent with this Court's decision.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

The undersigned hereby certifies that the foregoing brief of Plaintiff-Appellant Rambus Inc. contains 13,253 words and is in compliance with Federal Rules of Appellate Procedure 32(a)(7)(B) and (C).

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I hereby certify that I have caused true copies of the **Corrected Brief for Plaintiff-Appellant Rambus Inc.** to be served on this 6th day of November, 2001 by Hand and Federal Express:

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