

United States District Court,  
N.D. California.

**RAMBUS INC,**  
Plaintiff.

v.

**HYNIX SEMICONDUCTOR INC., Hynix Semiconductor America Inc., Hynix Semiconductor Manufacturing America Inc., Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., Samsung Semiconductor, Inc., Samsung Austin Semiconductor, L.P., Nanya Technology Corporation, Nanya Technology Corporation U.S.A,**  
Defendants.

**Rambus Inc,**  
Plaintiff.

v.

**Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., Samsung Semiconductor, Inc., Samsung Austin Semiconductor, L.P,**  
Defendants.

**Rambus Inc,**  
Plaintiff.

v.

**Micron Technology, Inc., and Micron Semiconductor Products, Inc,**  
Defendants.

Nos. C-05-00334 RMW, C-05-02298 RMW, C-06-00244 RMW

**Dec. 21, 2008.**

Jeannine Y. Sano, James J. Elacqua, Dewey Ballantine LLP, East Palo Alto, CA, Brian K. Erickson, Kevin S. Kudlac, Pierre J. Hubert, Dewey Ballantine LLP, Austin, TX, for Plaintiff.

Kenneth L. Nissly, Susan G. Van Keulen, Geoffrey H. Yost, Thelen Reid & Priest LLP, San Jose, CA, Patrick Lynch, O'Melveny & Myers LLP, Los Angeles, CA, Theodore G. Brown, III, Daniel J. Furniss, Jordan Trent Jones, Townsend & Townsend & Crew LLP, Palo Alto, CA, Vickie L. Feeman, Kai Tseng, Orrick Herrington & Sutcliffe, Menlo Park, CA, Davin M. Stockwell, Mark J. Shean, Orrick Herrington & Sutcliffe LLP, Irvine, CA, for Defendants.

## **ORDER CLARIFYING THE COURT'S CONSTRUCTION OF "MEMORY DEVICE"**

**RONALD M. WHYTE, District Judge.**

Rambus has filed a motion for leave to file a motion for reconsideration regarding the court's construction of the term "memory device" in the Farmwald/Horowitz patents. To ensure that the court had not committed a "[a] manifest failure," the court granted the motion and requested a response from the Manufacturers. The

court has reviewed the papers and its prior order. For the following reasons, the court clarifies its prior construction of the term.

In its prior order, the court construed the term "memory device" to mean "a device in which information can be stored and retrieved electronically." *Rambus Inc. v. Hynix Semiconductor, Inc.*, 569 F.Supp.2d 946, 972-74 (N.D.Cal.2008). The court rejected Rambus's request that the term be read as "an integrated circuit device in which information can be stored and retrieved electronically," which incorporated a limitation that the device be on a single chip. *See id.* at 971-72. At the time, the court noted that it could not fully grasp the nature of the claim construction dispute without some understanding of the Manufacturers' invalidity contentions. *Id.* at 971. As those contentions have begun to come to light, the dispute between the Manufacturers and Rambus with respect to the meaning of the asserted claims has come into focus. This has permitted the court to reevaluate its claim construction and refine its scope. *Cf. Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1329 (Fed.Cir.2008) (suggesting the wisdom of an iterative approach to claim construction).

The court remains convinced that there is no basis for reading a "single chip" limitation into the term "memory device." The specification discusses no such limit, and at various times, Rambus crafted dependent claims suggesting that a "memory device" is a broader concept than a single chip. Moreover, had Rambus meant to limit its claims to a single chip, it could have claimed a "memory chip" or used a similarly clear limitation. It chose the broad term "device," and must live with the claims it wrote.

But that does not mean that the term "memory device" lacks any dimensional limit, and any limitation on the scope of the term is missing from the court's first attempt at construing it. The Farmwald/Horowitz specification does not define "memory device," but it does discuss it in relation to a "memory subsystem" and otherwise suggest some limits. For example, the specification states that "[t]he present invention includes a memory subsystem comprising at least two semiconductor devices, including at least one memory device, connected in parallel to a bus ..." U.S. Patent No. 6,426,916, col. 3, 11.51-54. Thus, a "memory device" is limited in scale to being a component in a memory subsystem. Indeed, "[e]ach memory device contains only a single bus interface with no other signal pins." *Id.*, col. 4, 11.13-15; col. 5, 11.62-67.

This "component" interpretation of the term "memory device" is further bolstered by the detailed description. The description distinguishes "memory devices" from "processing devices." *Id.*, col. 5, 11.33-36. A "memory device" is "a complete, independent memory subsystem with all the functionality of a prior art memory board in a conventional backplane-bus system," suggesting that a "memory device" is smaller than a prior art memory board. *Id.*, col. 7, 11.23-26. The description repeatedly gives DRAMs, SRAMs, and ROMs as examples of "memory devices." *E.g.*, *id.*, col. 1, 11.50-55; col. 6, 11.16-21. Finally, the devices used in the overall system preferably have "very low power dissipation and close physical spacing" to allow for a relatively short bus (and thus higher frequencies). *Id.*, col. 18, 11.1-5; *see also* col. 19, 11.52-55 (describing the limited number of devices that can be connected to the preferred bus architecture because of size constraints).

A person of ordinary skill in the art, reading the term "memory device" in light of the specification, would not necessarily conclude that a "memory device" is limited to a single chip. Such a person of ordinary skill would, however, conclude that a "memory device" is constrained in its dimensions and features. A "memory device" does not include a microprocessor like a CPU or memory controller. It connects to a bus as a component in a larger system. While its size is not explicitly defined, it is on the order of a single chip, and smaller than a "memory board."

Condensing this understanding into a concise construction poses difficulties. The court believes the following construction captures the meaning of the term "memory device" as used in the claims and given meaning by the specification: a "memory device is a component of a memory subsystem in which information can be stored and retrieved electronically. It is smaller in physical size than that of a prior art memory board and has low power dissipation so it can be closely spaced to other components of the memory subsystem such as a processing device."

N.D.Cal.,2008.

Rambus Inc. v. Hynix Semiconductor Inc.

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