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Litigation Notes

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RAMBUS v. INFINEON

The U.S. District Court in Richmond, Virginia entered judgment for **Infineon** in the middle of the trial of a patent infringement case against it brought by **Rambus**. The case is the first of a series of patent infringement cases in which Rambus seeks to establish that its semiconductor patent portfolio is applicable to the well-established SDRAMs as well as to its proprietary RDRAM technology. A few days later, on May 9, 2001, the court allowed the jury to render a punitive damages award against Rambus of \$3.5 million on the ground that Rambus incorporated information in its patent applications that was obtained at meetings of an industry group to set standards for SDRAM chips.

The Infineon case involved only SDRAMs and DDR devices and did not concern Rambus' proprietary RDRAM, which in our understanding is the most interesting technology of the three insofar as it operates at 800 Megahertz, significantly faster than the 133 Megahertz of SDRAM and the 266 Megahertz of DDR. We think that Rambus has a good chance of obtaining a reversal of the trial court judgment on appeal, since Judge Robert Payne was unduly constrictive in his interpretation of the technical terms of the patents in his so-called Markman decision on March 15, 2001. The fact that Judge Payne terminated the case so abruptly has one significant advantage for Rambus, since it permits Rambus to file a quick appeal and meanwhile to argue that the other cases should be stayed until the Court of Appeals can evaluate Judge Payne's Markman decision.

The Markman decision, issued shortly before the start of the trial, was used to provide definitions for eight disputed terms used in the four patents at issue in the case. The most important disputed term was "bus," to which most of Judge Payne's opinion was directed. The other disputed terms were "block size," "read request," "write request," "transaction request," "first external clock signal," "second external clock signal" and "integrated circuit device." On every term, Judge Payne opted to accept the comparatively narrow definitions propounded by Infineon, and Judge Payne's decision to accept these narrow definitions is the main reason that Rambus lost the case. Also, on virtually every term, we thought that Judge Payne's definitions were improper, primarily because they placed excessive reliance on the specification and other parts of the patents to determine the meaning of the terms.

In the case of "bus," Rambus had said that "bus" is a commonly used term in the electrical arts and is well understood by those with skill in the art to mean "a set of signal lines used in an interface system" to which a number of devices are connected and over which information is transferred between the devices. Infineon said that "bus" as used in the patents had a specialized meaning limited to the Rambus

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“multiplexed” bus and therefore did not include the non-multiplexed point-to-point interfaces connected by separate lines familiar to the prior art. It argued further that the term as used in the patents applies only to multiplexed buses that transmit address, data and control signals. Focusing heavily on the specification of the invention in the patents (the specification was the same for all of the patents), Judge Payne concluded that since the only bus that was described in the patents is the multiplexed bus of the invention, the patentee must have intended to refer to this multiplexed bus when it used the term “bus.”

In our analysis, Judge Payne is making a fundamental error in defining bus in this way. Specifically, he is using the invention to define the words in the patent rather than using the words in the patent to define the invention. Even if the multiplexed bus is the only type of bus referred to in the patents insofar as it is a significant aspect of the invention, the inventor should be entitled to believe that in writing the patents’ claims the words will be used in their ordinary and conventional way, unless of course the inventor clearly indicates his intention to define a word in some other way.

We thought of a hypothetical example that illustrates our point. If an inventor creates a new type of bicycle it is quite possible that the only type of bicycle he will mention in the specification will be that new bicycle. Nevertheless, in using the term “bicycle,” he is entitled to believe that the term will refer to all bicycles of whatever type, including the bicycles found in the prior art. It is well established that courts are not allowed to redefine the terms of a patent so as to limit them in light of the specification and thereby save them from invalidity, and we think that it is equally clear that courts may not redefine terms so as to render a patent *invalid* or not infringed.

Further, we do not believe that Judge Payne made a convincing case that Rambus even attempted to redefine the term “bus” in the specification or, for that matter, anywhere else in the patent. He quoted from the “Detailed Description” section of the patents, which stated: “The present invention is designed to provide a high speed, multiplexed bus for communication between processing devices and memory devices and to provide devices adapted for use in the bus system.” To Judge Payne, this passage of the specification defines “bus” to be a multiplexed bus, but to us, it does nothing of the sort. Instead, it merely states that the invention contemplates a particular type of bus, i.e., a multiplexed bus.

The issue of whether the patents are limited to chips with multiplexed buses turned out to be quite material in the Infineon litigation, since many of the SDRAM chips on the market do not use multiplexed buses, and therefore this item alone eliminated a major part of the case.

Infineon was not content with persuading Judge Payne to limit the definition of “bus” to a multiplexed bus, since other limitations based on the specification could also be found. The Rambus bus in the patents was said to be used for the transmission of address, data and control information, and Infineon argued that a bus that did not transmit all three items (i.e., address, data and control) was not a bus. Judge Payne did not go this far, but it appears that he did use this argument at a later point in the case to justify his ruling that Infineon did not infringe. We think he was wrong on this reasoning as well, since a bus that can be used for address, data *and* control would infringe, in our analysis, if it is used for address, data *or* control. Infineon acknowledged that some lines on its products carry data and that others carry address and control information, but it says that a single line never carried all three. However, the ordinary definition of a bus is generally considered to include a *group* of lines, whether multiplexed or not, and therefore this argument seems incorrect.

As for the other disputed terms in the patents, Judge Payne was at least consistent insofar as he made the same logical error of reasoning that he made in connection with the definition of “bus.” In defining “read request,” “write request” and “transaction request,” Judge Payne was confronted with Infineon’s

assertion that each type of request must have address information indicating where the read, write or other transaction is supposed to occur in the memory device and that therefore this address information is part of the definition of a request. In explaining his reasoning, Judge Payne explained that, unlike the definition of “bus,” the terms “read request,” “write request” and “transaction request” are not terms of art and do not have ordinary and customary meanings. He then pointed out that a memory device cannot respond to a “read request,” for example, unless address and control information are also supplied, and he further pointed out that on every occasion in which a read request was used in the patent, address and control information was also supplied, and therefore he concluded that address and control information are part of the definition of the term as used in the patent.

Rambus had argued that Infineon’s construction incorrectly equates “read request” (or “write request” or “transaction request”) with “request packet,” which is a term that includes a read request, but Judge Payne said that the specification of the patent happens to use the term “request” and “request packet” interchangeably. Judge Payne called this drafting lapse “unfortunate,” but in our analysis there are times when it is unnecessary to distinguish between a request and a request packet because of the context, and in our analysis, a failure to distinguish between a request and a request packet when it is unnecessary to make the distinction is insufficient to obliterate the distinction altogether.

The next group of disputed terms related to “first external clock signal” and “second external clock signal.” Judge Payne explained that a “clock” as understood by one skilled in the art was actually a set of timing information derived from an oscillating reference voltage. Infineon argued that the second clock signal must contain different information from that of the first clock signal, whereas Rambus said that the two clock signals could be the same or different. Judge Payne explained that the reason for the two clocks was to correct for “clock skew” caused by propagation delay, ultimately creating an “internal clock” based upon an average of the two external clock signals, and in concluding that first signal and second signal meant different signals, he cited a Rambus expert who testified that in order to achieve this average, the two signals must necessarily contain different information.

Once again, we think that Judge Payne improperly confused the definition of terms and the invention itself. Rambus claimed that it needed two clock signals in order to achieve the most efficient timing for its multiplexed design, but it never said in its patents that the two signals necessarily had to be different from each other. Judge Payne’s practice of imposing artificial limitations on the scope of a patent by minimizing the scope of technical terms is, in our opinion, improper and will be the subject of criticism in the Federal Circuit Court of Appeals.

Finally, on the definition of “integrated circuit device,” Rambus again argued for an ordinary and customary definition, which was a “circuit constructed on a single monolithic substrate, commonly called a ‘chip.’” Infineon argued for an awkwardly narrow definition based on what the patents appeared to cover, i.e., a device composed of integrated circuits that include at least an ID register and related interface and comparison circuitry. Judge Payne pointed out that neither the claim language nor the specification are helpful in resolving the disputed meaning, but he said that relevant guidance is available from the file history, in which Rambus expressly limited its claims by adding restrictions in order to overcome a prior art rejection. The ID register and the interface and comparison circuitry were among the restrictions added to the claims in order to overcome a rejection.

From our perspective, it is quite clear that a patentee may not argue for a broad interpretation of the scope of a patent claim when that interpretation was surrendered at the Patent Office in order to obtain issuance of the patent. However, there is a big difference between the scope of a *claim* and the scope of a term used *in* a claim. The meaning of words used by a patent applicant does not change merely because the patent applicant was required to surrender some of the scope of the patent coverage in order to secure

issuance of the patent.