ECR #: 25
Title: Clarification of figure 3-21 text
Release Date: Feb. 17, 1997
Impact: Clarification
Spec Version: A.G.P. 1.0

Summary: Description of figure 3-21 is confusing and needs to be re-written.

Background:

Change Current Specification as shown:

Proposed New Text for text following figure 3-21 on page 43.

Figure 3-21 shows the master asserting **RBF#** indicating to the target that the masters read data buffer is full and it is not capable of accepting any new data. In order to ensure that 8 byte read operations can occur without delays on the **AD** bus, the arbiter must enqueue a new grant on each clock. In this case, the master must be able to accept 2 transactions worth of data because the arbiter is driving the second grant on the same clock in which the master is asserting **RBF#**. Therefore, the master must provide a minimum amount of buffering for two transactions, 8 bytes for the initial transaction and upto 32 bytes for the second. In general, the master for read transactions must provide upto 40 bytes of buffering when the initial transaction is 8 bytes and the second is longer than 4 clocks. Less buffering is needed when 8 byte transactions are not utilized (refer to TABLE 3-4 for details). The 40 bytes of buffering assumes the master is capable of asserting **RBF#** the clock following the assertion of **GNT#**. If the master delays the assertion of **RBF#** or desires to minimize the frequency in which it stalls the return of read data (**RBF#** asserted), more buffering should be provided. This figure, interleaves HP read data when the master indicates that it can not accept any more LP read data. If HP data was not pending, the **AD** bus would have been dead on clocks 5 and 6.