

16.317: Microprocessor Systems Design I

Spring 2012

Lecture 28: Key Questions April 9, 2012

1. Explain the concept and purpose of organizing memory into banks.
2. Explain the concept of data interleaving. Why are data typically organized this way in memory?

3. Explain the figure below, which shows a misaligned data access on the 80386.

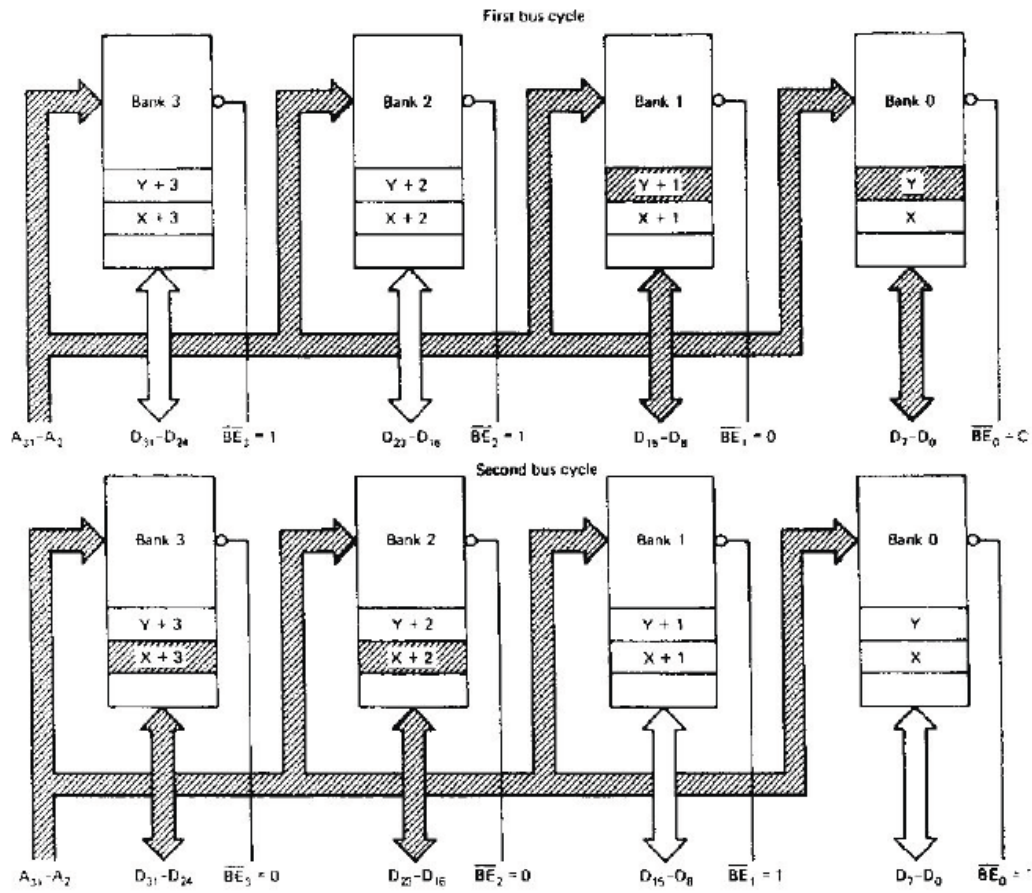
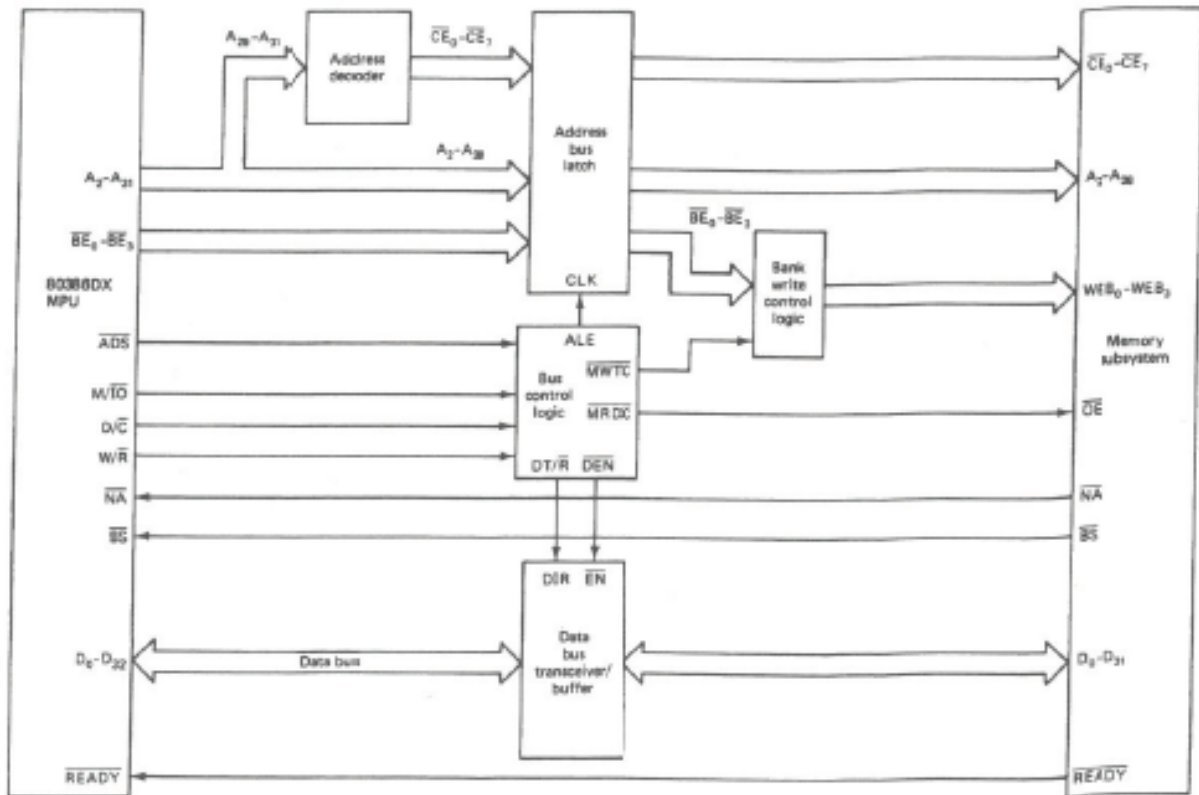


Figure 9.24 Misaligned double-word data transfer.

4. Explain the major components of the memory interfacing circuitry shown below.



5. What is the purpose of address decoding? Why are the more significant address bits used for decoding, while the lower bits are used for choosing a location within a device?

6. Explain why many memory interfaces require the address (and potentially other signals) to be latched.

7. What signals go into the bus control module? Why?