Memo to: EE262 Students  
From: The Boss  
Date: October 17, 2002  
Reference: Operation of the 74LS74 D-type Positive Edge Triggered Flip Flop

Summary: This memo to you asks that you explain the operation of the D flip flop.

Introduction:

I understand that you have recently completed an experiment in the EE262 laboratory where you used a 74LS74 flip flop as a data latch. I have never fully understood the operation of this device so I would like you to write me a short memo explaining it.

Points to Cover in the Memo:

Please answer the following questions about the operation of the flip flop.

1. What is the basic operation of the device?
2. When does the output change relative to changes in the clock.
3. What is meant by data setup and hold time?
4. What is the function of the SD and CD inputs?
5. What is the maximum frequency that the 74LS74 can be clocked?
6. What are some other applications of the flip flop?

Memo Format:

Please use the *Informative Memo Report* format that is given on the course web site. Be thorough and cover all the questions but you do not have to write pages and pages. You should be able to cover everything in two pages.

Conclusion:

You are all doing fine work in the laboratory. Congratulations. Keep up the good work and I’m certain that you will all receive a raise at the end of the semester.