UNIVERSITY OF TEXAS AT DALLAS
Department of Electrical Engineering

EE/TE 4367 - Telecommunications Switching & Transmission
Assignment #6

Date assigned: 2/28/2008
Date due: 3/6/2008

6.1 A TDM system operating at 2 Mbps is to have a average reframe time of 10 msec. What is the maximum possible frame length if framing is established with a bit-by-bit frame search (added-bit framing)? (Assume that 1's and 0's in message channels are equally likely.)

6.2 How many crosspoints are needed in a 1024-line, three-stage space switch if the input loading is six common-channel signals per line and the maximum acceptable blocking probability (using a Lee graph analysis) is 0.005?
(a) if n=16, N/n=64
(b) if n=64, N/n=16