

**Homework Assignment No. 13**

Due on Friday, April 23, 2004

1.) Problem P10.11 of the text (10 points)

[Ans: 0.13 $\mu$ m technology will need approximately twice the number of inverters as 0.18 $\mu$ m technology].

2.) Problem P11.2a of the text (10 points)

[Ans: Assume the inverter currents are 550 $\mu$ A each. The worst case drop is 0.43V]

3.) Problem P11.10 of the text (20 points)

[Ans: Your answer should have an initial chain of inverters that can drive the long wire with buffers inserted to reduce the wire delay. The total delay through the circuit should be close to 600ps.]