

X-Sender: horowitz@vlsi.stanford.edu
Date: Thu, 06 Feb 2003 16:31:04 -0800
To: Diane Shankle <shankle@ee.Stanford.EDU>
From: Mark Horowitz <horowitz@Stanford.EDU>
Subject: Re: Quals Question 2003

Quals question:

Have a picture of an inverter driving a capacitor to Gnd. Also on the board is a simple model of the current through a transistor, $I_{ds} = k(V_{gs} - V_{th})^2$

Look at the power supply current, where does the current flow?
What is the energy consumed in this circuit
Capacitor is lossless. Where is the power dissipated
Write an equation for delay
Can you reduce the supply and not change the delay?
To minimize power, what should the threshold be?
What is the ratio of the static to dynamic power?

At 10:23 AM 1/31/03 -0800, you wrote:

Quals Question 2003

Please send a copy of your Quals Question or you can email the question.
Thanks,
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